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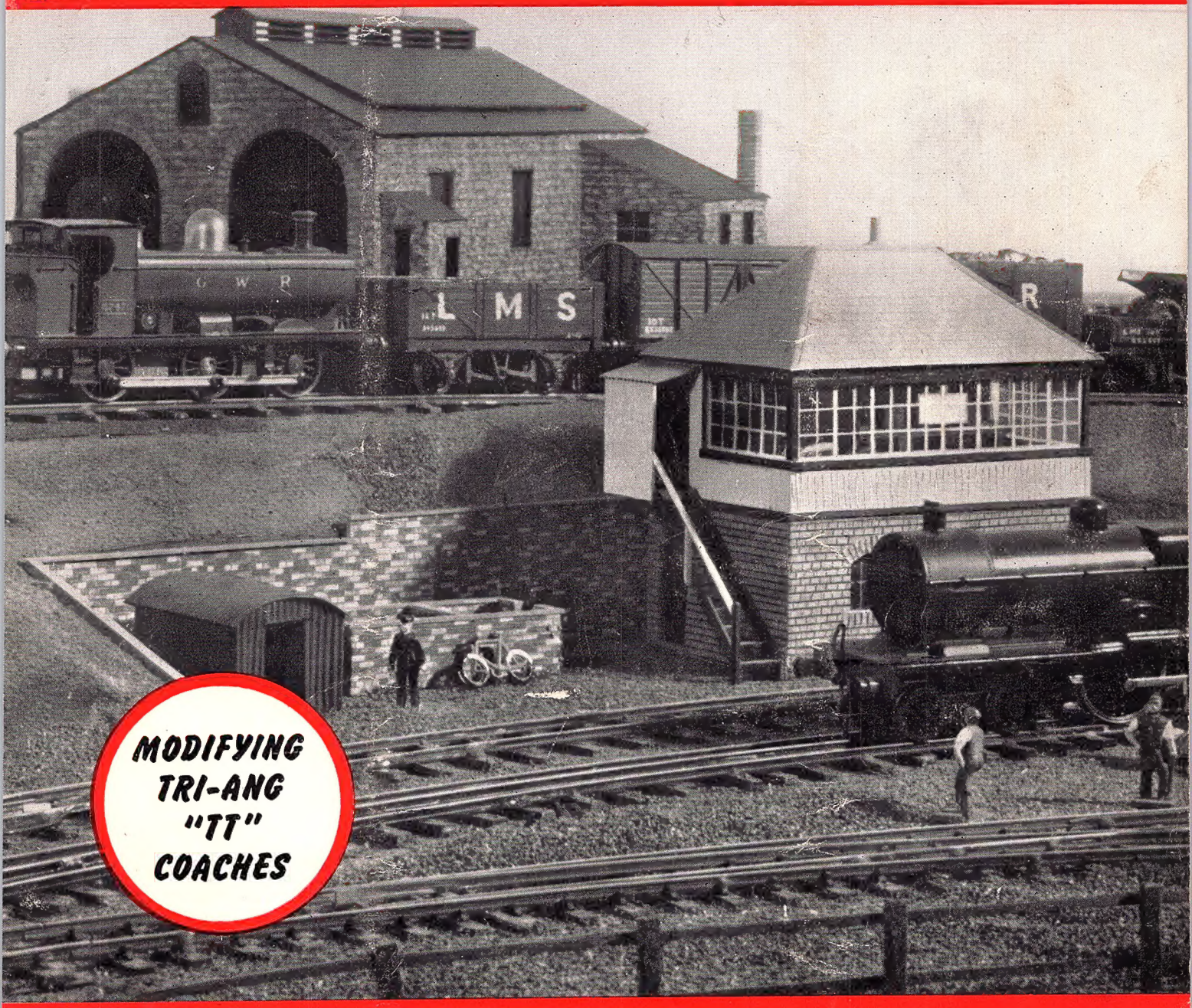

VOL 8 1957 2/- JUNE

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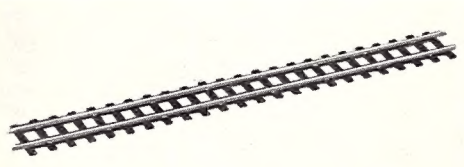

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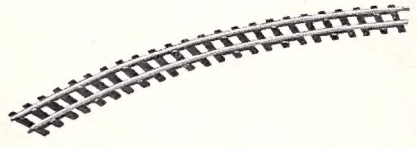

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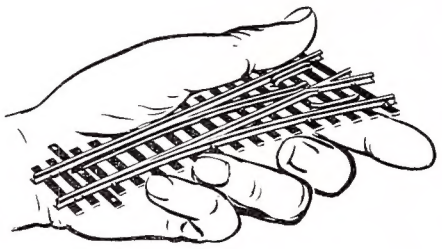

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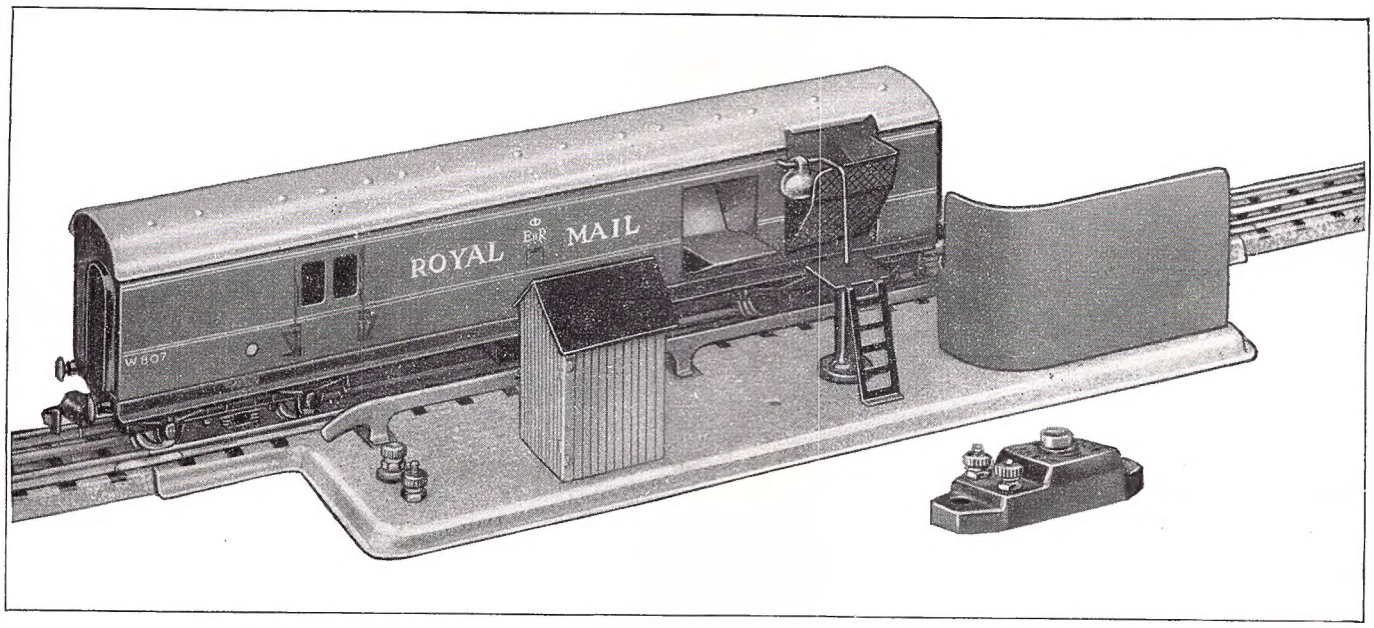

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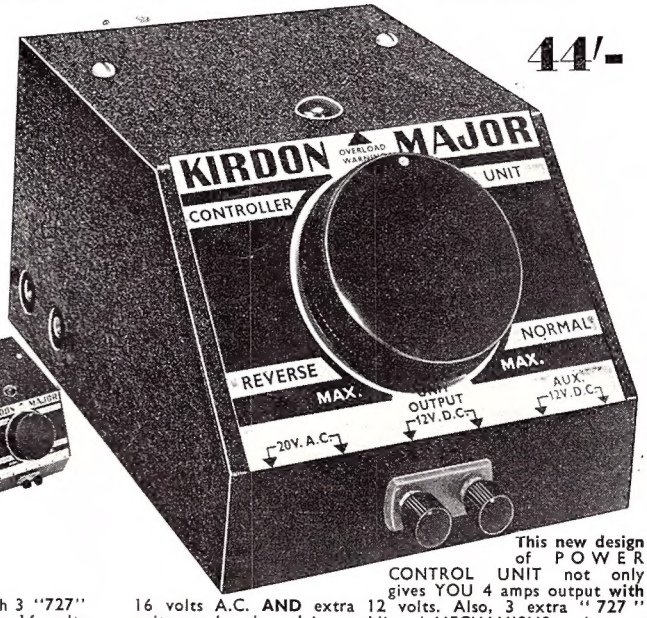

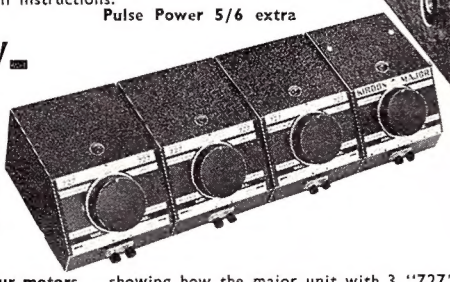

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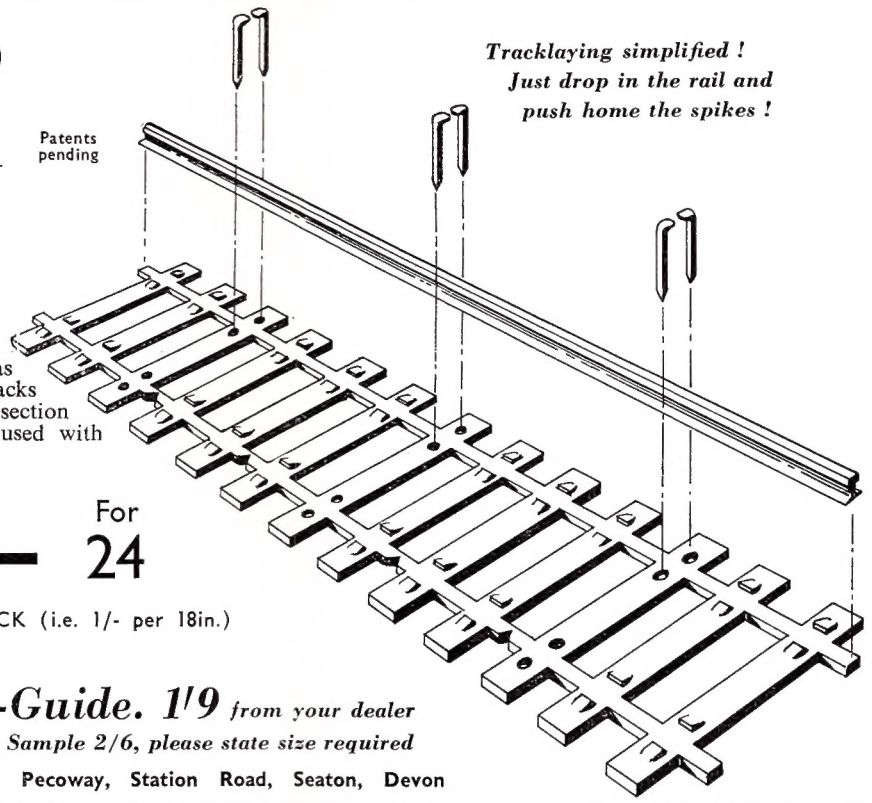

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The Lobby

WITHOUT a doubt the Model Railway Exhibition showed clearly how much "TT-3" has caught the imagination of the model railway world. Indeed, the general impression was neatly summed up by a friend of ours who remarked: "It's not that 'TT' is small, it's 'OO' that's big!"

However, despite the interest shown and the rapid appearance of essential items from the trade, talk of a big swing over to the new scale is a matter of pure speculation. Whatever may be the case in future, today "OO" is still the predominant scale, and likely to remain so for some time to come, as no one is going to tear up a satisfactory layout merely to adopt a new scale, whatever the size! We gained the impression that the majority of recruits to "TT-3" had come from the ranks of would-be modellers hitherto barred by lack of space, though we noted a significant number who were contemplating a "TT" line in addition to an established layout.

We were very pleased to note that so far all products have been produced to a uniform scale. It is to be hoped that an early meeting of the B.R.M.S.B. will officially adopt Tri-ang's practical standards to prevent any possibility of confusion in the future. It is remarkably easy to consider, from an armchair, the theoretical advantages of finer standards, but the practical importance, not to mention convenience, of possessing one set of standards for the one scale is overwhelming.

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It is natural that when so much attention is being focused on the latest developments established scales appear to receive less than their just dues; yet one of the most significant factors this year was the number of good new 7mm. scale models to be seen on the static displays. While no one, no matter how partisan, would suggest that this indicates a return to the days when "O" gauge was the most popular scale. it does indicate that it is more than holding its own. This size is becoming recognized as a most suitable one for the construction of super-detail models of railway equipment, and many workers recognizing this, while not possessing the space for an extensive layout, are constructing a simple track and devoting their attention to the satisfying business of producing a small number of perfect models. In this way the craftsman is able to enjoy his side of the hobby to the full.

"O" gauge is ideal for the dynamic form of museum exhibit pioneered by Derby Museum with its exquisite Midland Railway system. Indeed, before nationalization the L.N.E.R. was making a collection of 7mm. scale models for such a layout, and we were therefore delighted to see that British Railways have continued this aim, and have already amassed a very fine collection of models towards this end, a selection of which was displayed on their excellent stand. A layout of this nature would provide the logical ultimate home for all fine "O" gauge models.

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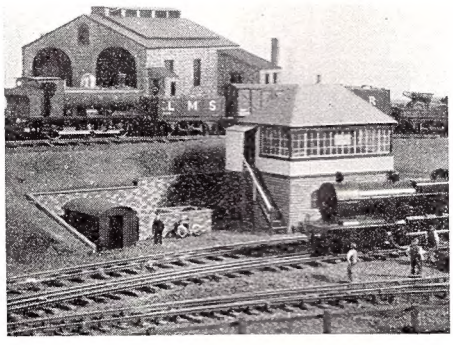

COVER PICTURE

A scene on the "OO" gauge layout of Mr. Keeping. Photo by Ronald Doyle.

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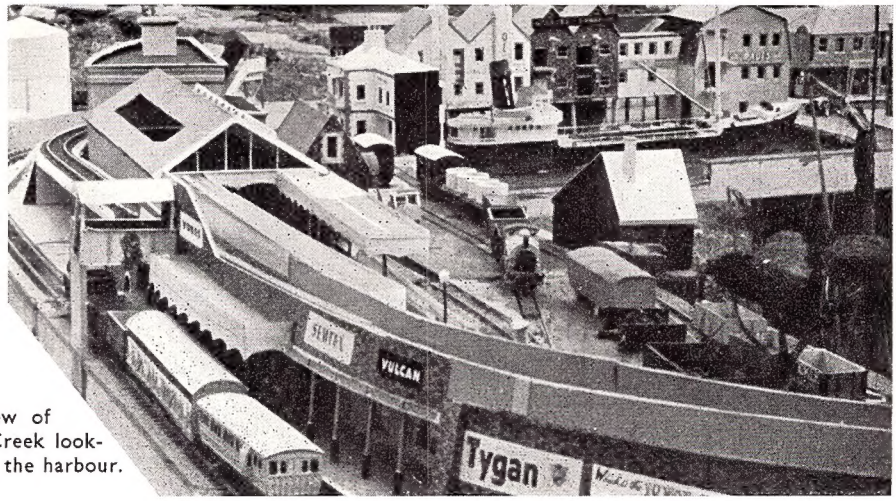
Railway of the Month

POTTERS HERON

by Stanley Elson, A.R.I.B.A.

A PORTABLE "OO" GAUGE SYSTEM

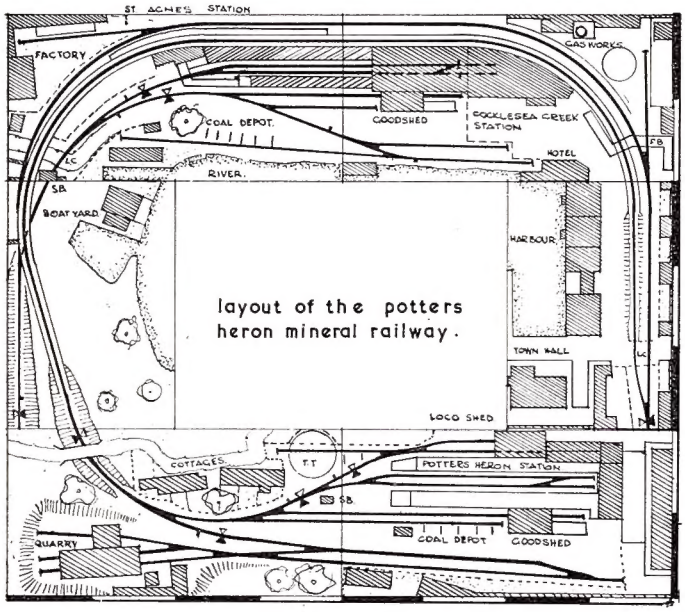


General view of Cocklesea Creek looking towards the harbour.

THE Potters Heron Railway, like many models, began life as a pipe dream. Its size frequently varied according to the mood and optimism of the author, but when it finally became earthbound early in 1954 it materialized as a plan occupying an area of some eight feet by seven feet. Even this was found to be rather large to reside permanently in the bedroom-cum-study-cum-workroom which it normally occupies, and so a portable layout has been constructed in six units, each of a standard two-foot width.

This method of construction helped the general engineer to the Potters Heron Railway enormously, as I was able to get all the track laid and the trains running before being called up in August 1954. Since then the scenery has been built up—a board at a time—during leaves, until posting to West Africa finally put a stop to the work. As can be seen from the photographs, a great deal of detail work still remains to be done, and although all the buildings at Potters Heron have been designed none of them have yet been constructed, and the baseboard lies bare except for the tracks.

The history of this railway is briefly that of a line on the borders of Essex and Suffolk, built during the 1870s to bring the minerals necessary for the manufacture of cement down from the hills to the river for shipment to the Medway and the big cement works there. Other traffic has also grown up with the prospering of the line, and sugar beet and cattle are handled, together with considerable passenger traffic.



According to the timetable (not shown in Bradshaw) the line runs from the river port of Cocklesea Creek to Potters Heron (a matter of thirty-nine and a half miles in theory and seventy-eight feet in fact). The timings for this run are sixty minutes for the fast passenger train, 100 minutes for the local passenger, and 135 minutes for all goods and mineral trains. The actual times, of course, depend greatly on the amount of time available to the operator, and so, in order to keep the trains running at their correct speeds, time is "saved" or "wasted" in the tunnel as the need arises, and it is also in the tunnel that the trains may pass one another on what is otherwise single track line.

Three stations have been modelled, although, in theory, there are three intermediate stations and three wayside halts all served by the Potters Heron Railway, and the following description of the line shows how this fits into the actual model, and also helps to give a little local colour.

Cocklesea Creek, which has several rather charming Gothic buildings, including the late-sixteenth-century Town Hall and Customs House, and the Tudor inn the Golden Hind, all of which stand on the north quay of the harbour, can trace its history back almost to Boadicea herself. Its present occupations are shoal fishing and summer visitors, which, together with the several small local industries, help to keep the town prosperous.

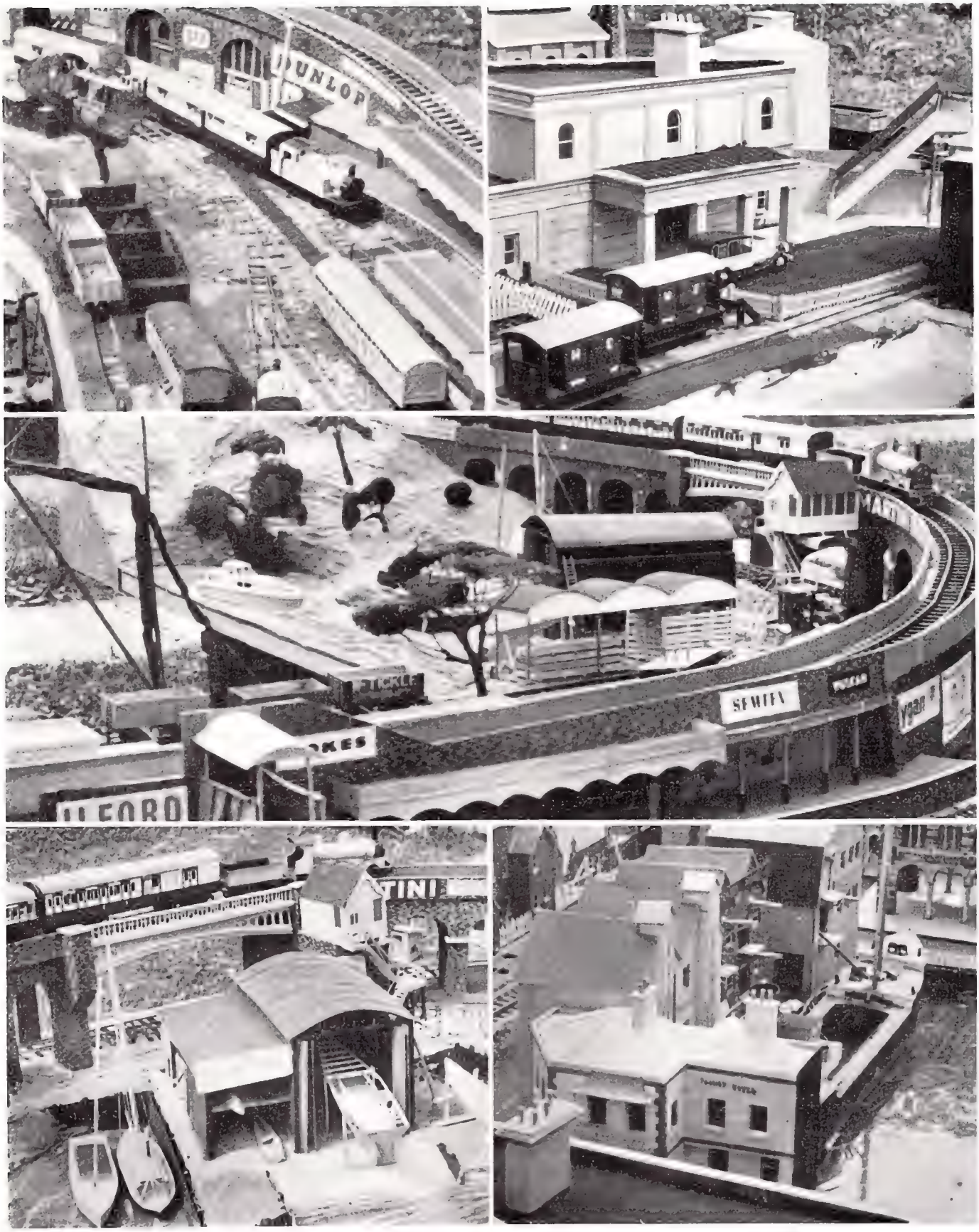
The creek itself is fast silting up, and is now only navigable for large craft up to Limehouse Reach. Occasionally one of the few remaining sailing barges drifts the three miles up to the mills on a spring tide, but usually the only craft which frequent these attractive waters are the pleasure launches and yachts of the holiday-makers.

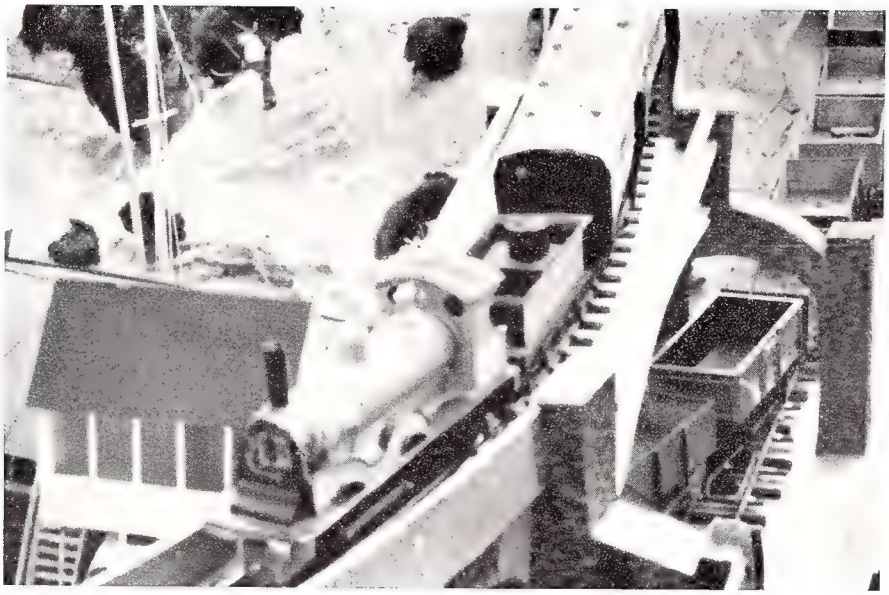
The villages of Goose Willow, Little Hogwash and Alambra End are served with simple halts, but the small towns of St. Agnes-all-Hallows (which is famous for its sheep and turkeys), Barton Green and Rainham Ferry can boast of proper stations, each with its own stationmaster's house, and necessary goods sidings, etc.

The hills which lie to the north-west of Goose Willow and Barton Green are tunnelled by the railway, while at Rainham Ferry the line crosses the valley of the River Cockle on a long brick-built viaduct, which leads up to Potters Heron and the mineral quarries.

When the Potters Heron Railway was first planned on paper, two principles were kept in mind—the first that end-to-end working was of prior importance, and the second that if possible trains should be able to work continuously if so desired. The accompanying plan shows how this was obtained with a low- and high-level terminus connected to a continuous low-level track, and a short

Top left: Cocklesea Creek goods yard.
Top right: the station building, Cocklesea Creek.
Centre: the boatyard with viaduct behind.
Bottom left: Taickle and Sons' boatyard.
Bottom right: a close-up of the harbour.


DUNLOP
SEWER



10.25 from Potters Heron headed by No. 1, "Elinor."

description of the model will give some idea of its scenic features and the method of working.

Cocklesea Creek, home of the Potters Heron Railway, possesses a remarkably fine station, which was described in the November 1956 RAILWAY MODELLER.

The goods yard, which faces on to the creek and harbour, contains the freight shed and cattle pen, together with several small coal stacks, coal depot and a small private wood-yard.

The main harbour contains the warehouses of Collies, purveyors of ochre; of Tekers; and of Pauls, the sugar-beet people.

On the left of the line as it bears round to join the main oval is the well-known shipyard of Taickle and Sons, who once built the seventy-two-foot *Philomena Sproggett,* a spritsail barge which sank off Foulness Island in 1877. At present they have a seven-ton yacht under construction for the managing director of the railway company. In the pool alongside the dinghy store there are a couple of yachts in the process of being fitted out for the summer season, while out in the river a large forty-foot motor launch is coming in to refuel.

Passing under the iron railway bridge which crosses the line at this point (supposedly L.N.E.R. to Lowestoft and Yarmouth) the train soon enters the tunnel at Goose Willow, and emerges again near the mills along Limehouse Reach. (In reality, of course, these are the backs of the warehouses in the harbour.)

Passing the backs of some rather dirty Victorian tenements the train veers round, past the gasworks and its siding, into St. Agnes-All-Hallows station. The station, due to the limitations of the site, is built into the hill (viaduct) and access is provided by an overbridge. Just beyond the station a siding leads into a small factory yard. Shortly after leaving St. Agnes the line plunges into another tunnel and emerges on the outskirts of Rainham, where it begins to climb steeply up to Potter's Heron on a long brick-built viaduct, crossing the line from the low-level terminus (this time the River Cockle) over an iron bridge the spandrels of which are filled with decorative Gothic tracery.

The line, still climbing, passes through a cutting and under a small road bridge, where it swings round to the left into Potters Heron, past the gardens of some cottages on the left and finally into the terminus.

A branch line from the goods yard leads to the processing plant of the Potters Heron Mineral Company, where the three sidings are usually pretty busy handling the business of the works.

Although the line is fairly prosperous, the directors have always followed the policy of buying second-hand rolling stock, which is most fortunate for the author, as anything which catches his eye can be modelled regardless of the company to which it originally belonged.

At present the three locomotives in operation are having a busy time handling all the traffic, but it is hoped that "demob" will provide the opportunity of building a fourth locomotive.

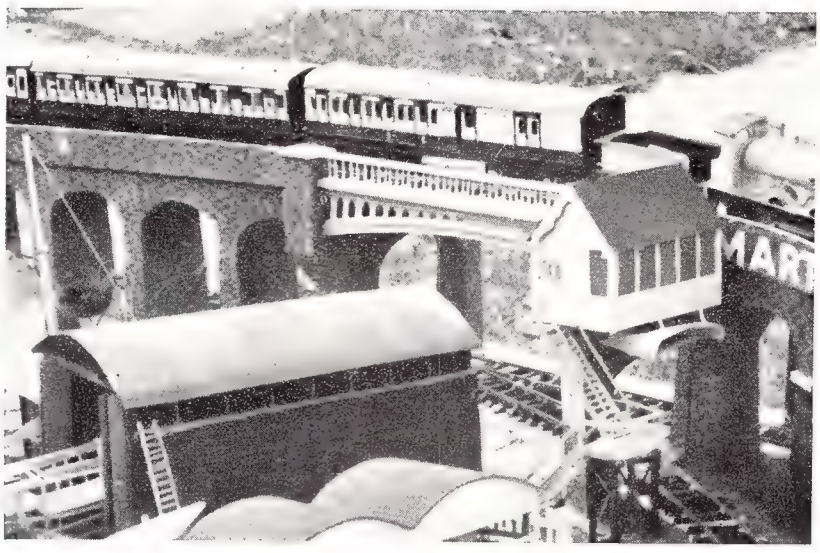
No. 1, "Elinor," proud possessor of the line's blue riband (39½ miles in forty minutes), is an Adams 0-4-2 Jubilee locomotive with a quaint ex-G.N.R. four-wheel tender—a survivor of the first model locomotive built. The superstructure of the model is made principally from postcard and sheet obechi wood, liberally coated with two coats of thin shellac rubbed down with fine wet and dry emery paper and finished with a further two coats of pale azure blue oil paint, and lined out in red and white. The motor is an X3, a little noisy perhaps, but powerful enough for the work in hand.

No. 2, "Eliza," is an ex-L.M.S. Rovex "Jinty" tank, also finished azure blue, which with a little additional lead packed into the body will haul twelve trucks quite comfortably up the 1-in-42 incline.

No. 3 is the little 0-4-0 "Gnat," which has been christened "Squeak"—appropriately named, in spite of judicious oiling. She has unlimited power, and can do anything the line is likely to require of her, including an outrageous speed if the operator feels so inclined.

No. 4, it is hoped, will be a small Prairie 45XX—again card built, and fitted with a K's small motor and flywheel for smooth running.

Passenger stock at present consists of three ex-London and Tilbury coaches, including two end brakes. This is usually run as one unit behind loco No. 1, one L.B.S.C.R. balloon-end compo and an ex-L.S.W.R. passenger luggage van. These five coaches are finished in dark olive green with white upper panels, lettered in red and lined in yellow. A sixth coach which occasionally puts in an appearance is a G.W.R. six-wheeler, mostly used in mixed freight work on the slow goods.



The viaduct and Cocklesea Creek signal cabin.

Customs House and Town Hall, Cocklesea.

Freight stock is rather mixed and includes two Rovex guards' vans, four closed goods vans and two bolster wagons. There are also two cast Dublo B.R. mineral wagons and two Peco wagons.

Finally there are twenty-four mineral and coal wagons built by the writer, and two cattle trucks—one a four-wheeler and the other a bogie.

The line, which is two-rail 16.5mm. gauge, is mostly hand built, using CCW chairs every three sleepers. At present it is worked from one controller, which greatly limits working of traffic, and another controller will be obtained as soon as conditions permit in order to increase the variety of operation.

In order to make the working as flexible as possible the line is broken up into sections with switches, as follows: (a) station area, (b) goods area, (c) quarry area, (d) inter-connection line between the termini, (e) tunnel section with by-pass.

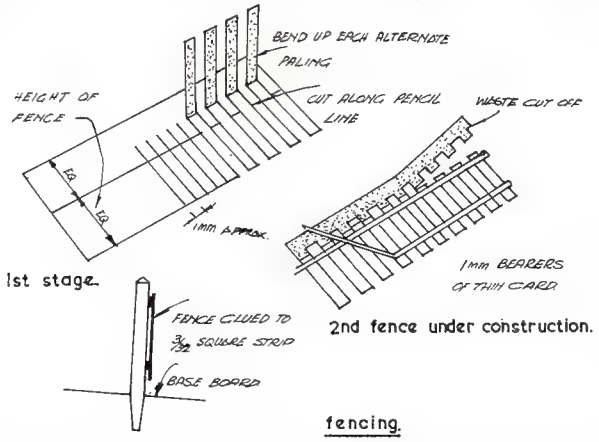
All the buildings have been designed by the author, which has added to the interest of building up the railway. When tired of modelling railway items, another house, car, yacht or tree relieves the monotony of repetitive work. I find this very important, as it prevents discouragement when things seem to be going rather slowly.

The buildings, which have been made up of a variety of materials (but mostly in various thicknesses of card), are coated with shellac on completion, to prevent warping, and finished in oil paints or building papers. Methods of construction vary according to the type of building, of course, but over a period of time I have built up my own method, like many another modeller, with occasional hints from John Ahern's wonderful book *Miniature Building Construction,* which I have found invaluable.

Scenic work has been built up by using Alabastine on card and hessian backing glued securely to formers cut to the general contour required. I have found that grassy areas can be well represented by adding two parts of fine sawdust or chicken grit to the Alabastine, mixed with one part of dark brown students' powder colour. When painted with poster colours any bare patch shows through as brown earth instead of bald white.

Water is perhaps one of the most difficult of all things the modeller has to contend with. Glass, although perhaps ideal for a fixed model, is certainly too fragile a material to use for a portable model. I have found that cellophane provides a presentable appearance, and have therefore used it entirely on the Potters Heron Railway.

The river bed was coloured dark brown and, while still wet, splashes of red, yellow, blue and green were painted on it. These, of course, ran, but when two sheets of cellophane were glued on top the rough, crinkly appearance so obtained looked quite realistic. Around the dock I have splashed black quite liberally, and this gives it the correct effect of dirty coal dust.



fencing.

A tip for fencing which I have found saves time, temper and money is as follows: cut a piece of thin card to half the length of the required fence and to twice its height. Then, with scissors, cut at regular intervals and approximately 1mm. centres to within half an inch of the top of the strip. If a three-inch spacing of battens is required, bend up each alternate strip; if a six-inch gap bend up two strips (see sketch).

At approximately $\frac{1}{16}$in. from top and bottom, and also in the centre if your fence is more than a scale four feet high, glue long strips about $\frac{1}{16}$in.—$\frac{3}{32}$in. wide to represent the main beams. When the railings have set, cut off, using a steel ruler and a very sharp blade. The remaining tags can now be bent back again and the operation repeated. Vertical posts of match-sticks or other thin square-section wood can now be stuck on the back of the fence at 32mm. centres, with sufficient projecting below the fence to fit a hole in the baseboard so that when glued home the fence is rigid.

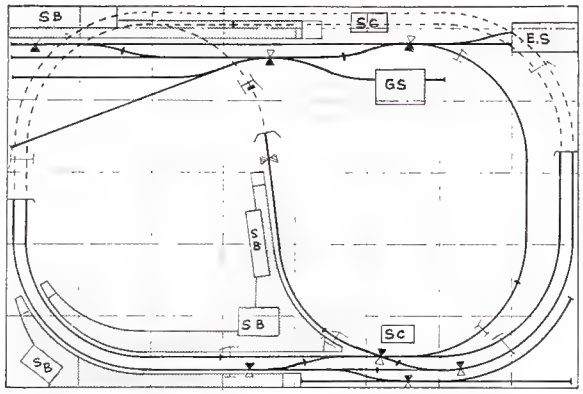
Finally, the moral that all modellers learn from bitter experience, and which I repeat for the benefit of newcomers to the hobby of scenic railway modelling, is: get the tracks laid and the trains properly running *first*—before any other modelling is attempted. It is extremely annoying to have to pull up a lot of scenic work because the line was not tested first.

If you observe this simple rule, very little can go wrong and you will spend many happy hours operating your railway, instead of becoming frustrated at failures which could have been avoided.

TWO PLANS FOR "TT-3"

AN OUT-AND-BACK PLAN FOR 6 x 4

by R. H. Sargeant



AS shown in the diagram, this layout consists of a double continuous main line, which is hidden for about half its length, connected to a small branch terminus by a rising branch line from the main station. To provide enough clearance between high and low levels (2in.), the main line falls an inch and the branch line rises an inch. All the gradients are 1 in 40 and quite satisfactory. Since the layout is primarily designed for Gem "TT" gauge track, all the points are standard 15in. radius, although the layout can be modified slightly for Peco points, which are 19in. radius. A diamond crossing is needed, but it is hoped that the trade will introduce one in the near future.

Both goods and passenger traffic can be operated to a large extent—in fact, three trains can be run simultaneously. If the layout is operated by one person, two trains can be left running on the main line while shunting takes place at the branch station. Some simple form of interlocking is necessary to prevent crashes on the diamond crossing—a section of the inner main line before the crossing should be made dead when the point on the other line is set to the curve. Since there is quite a lot of space in the centre of the layout, there are good possibilities for scenery.

As regards rolling stock, I suggest three locos of the smaller type, two or three coaches, a number of goods wagons, and perhaps a diesel car, a two-coach multi-unit, or a push-pull train.

THE TORAY-MIDWYE RAILWAY

by Cyril Smith

INSPIRED by the announcement of "TT-3" it has been decided, with the assistance of my colleague, Eric Jones, to build a portable layout in this gauge capable of proving what can be done on an area not exceeding three feet. I do not recall having previously seen articles in the magazines of layouts which are still only in the "draught-board" stage, and it is hoped to submit photographs at a later date as progress is made.

The baseboards are to be constructed from Cellotex on 2in. by 1in. frames and 3ft. in height, the actual track being laid on rubber strips and ballasted. The layout is designed on a standard size of 11ft. by 3ft. with an additional section at X and Y of 4ft. for exhibition purposes. The sections are to be divided as follows: Two 4ft. by 1ft., two 4ft. by 6in. and the two ends 3ft. by 1ft. 6in.

The main idea behind the layout is that it shall not be too complicated, but shall be interesting enough to give good running opportunities. The operations will be worked from two controllers, one for extensive use of the goods yard and engine depot section, and the other to work the rest of the layout.

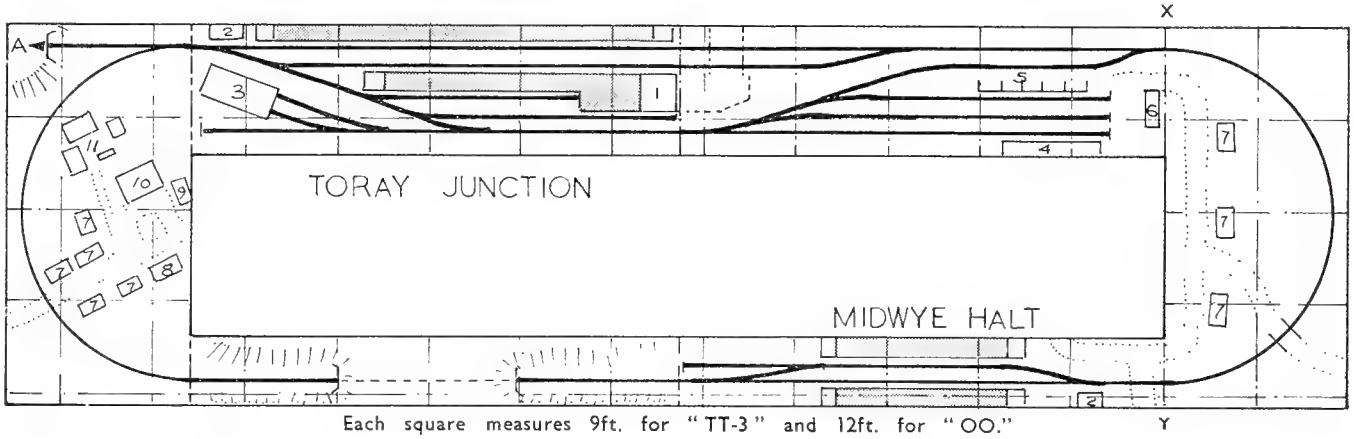
Operations on the layout will consist of one express loco with four coaches running in a clockwise direction, and one tank with two or three suburban coaches and one tank for the goods which will both run anti-clockwise. When the express is not working the loco will return to the depot and the tank engine will back the coaches into the sidings at the rear of Toray Junction. The local train will discharge its passengers on the main station loop platform and when not in use will be backed into the bay, awaiting the start of a new journey. The goods train when operating on the track can be held in the loop at Midwye so that another train can be run at the same time. The goods will enter the yard at the far end and hence on to the separate controller, where the vehicles can be shunted at will. The points on Toray Junction section will be operated from the signal cabin and will be on the rod-and-wire system, those in the goods yard will be hand operated at the points, and the three at Midwye will be electrically operated from the main control panel.

It is hoped eventually to signal the layout and arrange a working timetable to give a sufficiently interesting routine for the operators. It may be interesting to add that lessons learnt from the last club exhibition have led to the use of small 6in. sections of track to be put in at the baseboard connections, the permanent track finishing 3in. from the end of each section, thereby eliminating any likelihood of damage to track ends while being carried around. To simplify this it will be noticed that at all joins except one there is only single track.

To date the baseboards have been cut and some rubber stripping has been laid, and it is hoped to begin laying track in the near future.

KEY

1	Station building	7	Cottage
2	Signal cabin	8	Forge
3	Loco shed	9	Inn
4	Goods shed	10	Chapel
5	Coal staithes	11	Farm
6	Hut	A	Branch line



Each square measures 9ft. for "TT-3" and 12ft. for "OO."

MODIFYING TRI-ANG "TT" COACHES

by Peter J. Walker

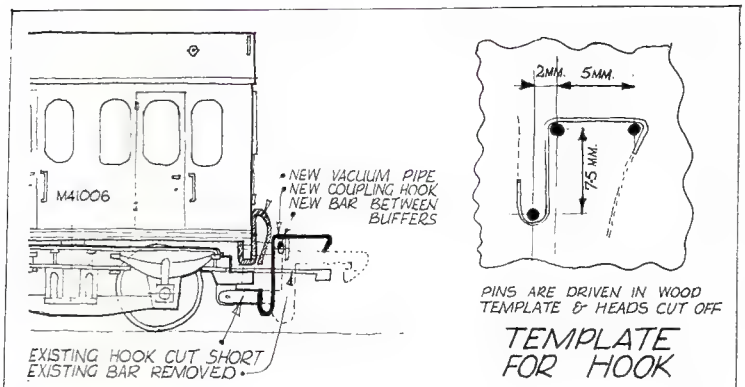


FIG. 1 : COUPLINGS

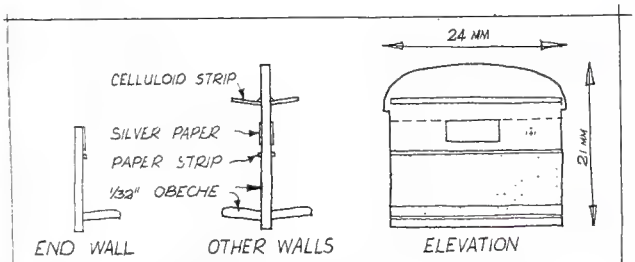


FIG. 2 : COMPARTMENT PARTITIONS

We didn't think it would be long before someone began adapting the new Tri-ang stock. As this article shows, a little work will add that extra touch of realism !

THE first samples of the new range of Tri-ang Rovex equipment in the new "TT-3" gauge give us a promising foretaste of what will in a few years become a popular scale for the railway modeller. The suburban coaches, which are of two types—1st/2nd class and brake/2nd —are of simple yet highly ingenious design, and they provide a wealth of detail which many an experienced modeller would find hard to reproduce himself.

The basic components of the vehicles are as follows :

(1) Main body shell (one-piece plastic), comprising floor, side and end walls.
(2) Roof (one-piece plastic), with tags interlocking into body shell.
(3) Glazing strips (thin perspex), interlocking into body.
(4) Undergear and truss assembly (one-piece plastic), interlocking into floor.
(5) Bogies, including couplers, riveted to floor.

The ingenuity of the design reflects great credit on its designers, especially as it enables us to obtain excellent models at such a reasonable price. However, there are certain features with which the enthusiast may not be satisfied, and as many improvements are simple to make perhaps it would be worth while making them known.

COUPLERS

The couplers provided are foolproof in design and naturally built to withstand very rough use. For this reason they are over-scale, and without intending any slight on the manufacturers I show in Fig. 1 a simple alternative using 26s.w.g. brass wire. This works on exactly the same principle as the coupler fitted, but is a little more delicate. The jig suggested is a very simple affair which makes it possible to produce the hooks very quickly indeed. The bars are easily fixed to the buffers : I cut off a piece of wire about two inches long, bent it round both buffers with the fingers, snipped off the surplus wire at each end, and then tightened it up with a pair of long-nosed pliers. The original coupler had, of course, been previously removed, and it was a very simple matter to solder the hook in place.

AXLEBOXES

The standard Tri-ang policy of having open axleboxes may be incorrect as far as prototype is concerned, but it makes production (and purchasers') costs cheaper and allows for easy replacement of wheels or axles in case of accident. No doubt it would be possible to glue a tiny piece of card over the axle end, but in view of the oil which should be in the axle box I was satisfied with a daub of indian ink mixed with soap over the offending polished faces of the axle-ends.

VACUUM PIPES

In order to add some detail to the ends, which look a little bare, I added a tiny piece of 22s.w.g. copper wire suitably shaped, as in Fig. 1, to represent the vacuum pipe connection. In order to prevent fouling the couplers, I put this well to the side of its correct place, but the effect still made it worth while. Because of the thinness of the plastic moulding I was reluctant to use a glue which might cause any buckling, and so I used "Croid," which should not react in any way with the plastic, although the adhesion may not be so reliable. I should add that this was done in a cold room when the glue was very stiff: I would not guarantee such results on a hot day when it is like hot treacle !

INTERIOR DETAILS

The insides of these vehicles are simply asking for interior fittings, and it is a simple matter to install them. With the exception of a mysterious hole in the centre of the floor, all the holes and projections occur under a seat position.

My first operation was to remove the roof, which comes off with a sharp tug (do not do this too often or you will impair the natural springiness of the clips), and also the glazing strips. The bulky clip securing the undergear assembly was cut off with a modeller's knife, the assembly being later glued in position with "Croid" again. The inside walls, floor and roof were painted with oil-based paint (so-called quick-drying), white above waist line and dark brown below. Needless to say, care was taken not to let the paint flow on to the "reveals" of the window pillars, where it would be visible externally.

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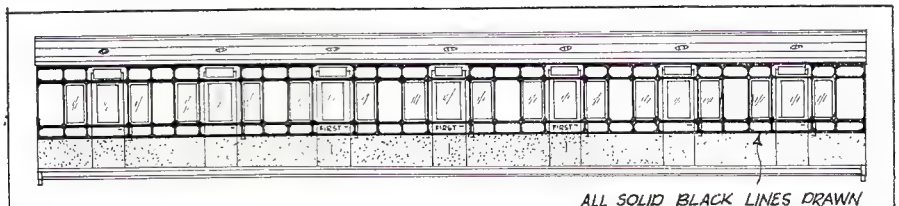
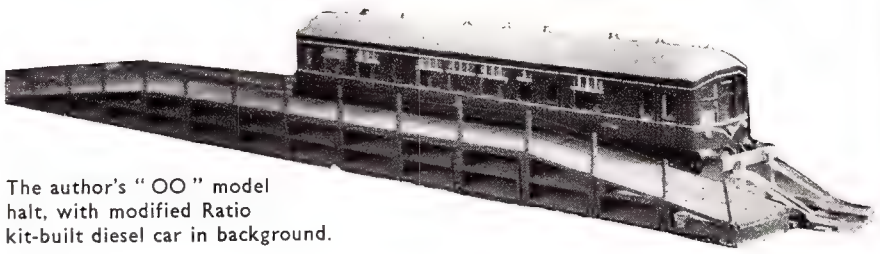


FIG. 3: DUMMY PANELLING

MAKE A SIMPLE HALT



The author's "OO" model halt, with modified Ratio kit-built diesel car in background.

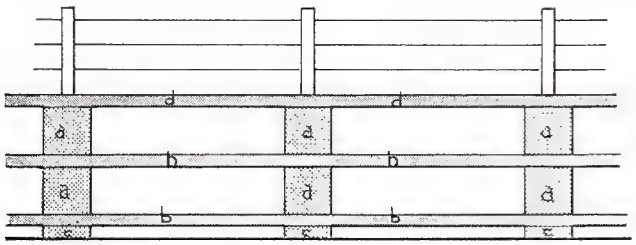
by Michael Farr

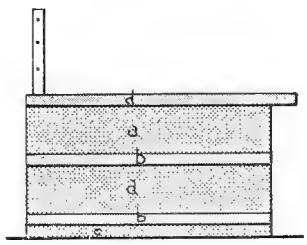
FOR anyone who wants a modern—and very simple—halt, Radclive or Water Stratford may well be the answer. The prototypes were built in July 1956 between Fulwell and Westbury and Buckingham on the Verney Junction to Banbury branch of the old L.N.W.R. They are part of an experiment to see whether passengers can be brought back to a line, otherwise likely to suffer closure, when the services are dieselized and made more frequent. Ratio have a kit (562) for one of the single-unit railcars, M79900, used on the Buckingham to Banbury service, so that prototype working could be undertaken.

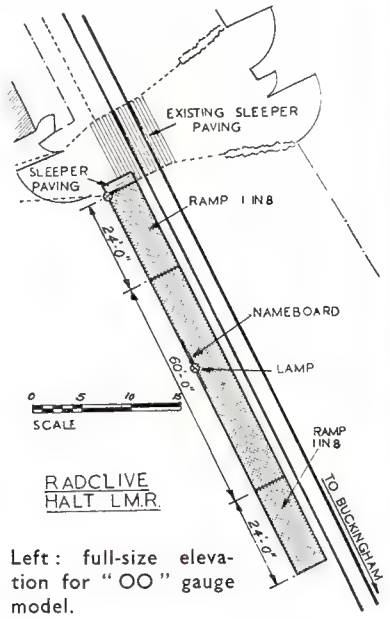
Through the kindness of the public relations officer of the London Midland Region, I managed to obtain a plan of Radclive halt, and since the prototype is built of old sleepers I decided to use balsa for my 4mm. scale model. Two pieces were needed, one 3ft. length x $\frac{1}{4}$in. square and one 3ft. x $\frac{1}{16}$in. The former was cut into about two dozen pieces $1\frac{1}{4}$in. long, and the latter into a strip $\frac{1}{4}$in. wide and another $1\frac{3}{8}$in. wide. The remainder of the $\frac{1}{16}$in. balsa was cut to $\frac{1}{4}$in. x $1\frac{1}{4}$in.

Before starting the cementing it will probably be found easier to build the whole halt up on paper or card. The $\frac{1}{16}$in. x $1\frac{1}{4}$in. x $\frac{1}{4}$in. pieces are stuck on this at 8ft. 6in. centres (about $1\frac{1}{4}$in.), and on top of these is cemented one of the $\frac{1}{16}$in. x $1\frac{1}{4}$in. pieces, about 18in. long. On top of this again are glued twelve of the $\frac{1}{4}$in. x $\frac{1}{4}$in. x $1\frac{1}{4}$in. spacers at 8ft. 6in. centres, and when dry a further piece $\frac{1}{16}$in. x $1\frac{1}{4}$in. is cemented into position. This is just over 12in. long. The correct size can easily be gauged by the $\frac{1}{4}$in. square spacers, eight more of which are glued on top again. The $\frac{1}{16}$in. x $1\frac{1}{4}$in. piece of balsa can now be cut to length and scored at the joint of the ramp and the platform; at the same time lines can be scribed to represent the actual sleepers. Before this fits down snugly it may be necessary to sand the ends of the middle strips of balsa at an angle. On my model I used Slater's four-wire posts (with only three wires!) and I shall eventually fit the nameboard in the centre, as well as the two oil lamps.

When put in position on the layout the base should be two scale feet below rail level. If this is impossible, the bottom layer of "sleepers" can, of course, be omitted.







Left: full-size elevation for "OO" gauge model.

MODIFYING TRI-ANG "TT" COACHES

(*continued from previous page*)

Being a great believer in prefabrication where possible, I made the compartment partitions and seats and painted them, leaving them to be assembled next day. Fig. 2 shows the arrangement of these details. I painted the upper part white, the seats with CCW flock-paint and the undersides dark brown. Some of Slater's plastic figures, after many operations with a razor blade and hot water, made passable representations of passengers, and I am especially pleased with one of the well-known "Slater twins" who, with a plasticine cap and certain other modifications, now permanently looks out of the guard's window in the brake/2nd, with his hands leaning on the window sill in characteristic British Railways pose. The following day, when the paint was thoroughly dry, I replaced the glazing strip, after leaving an aperture for the guard's window, and glued the partitions in place. Care was taken, however, not to let any glue touch the glazing strip, which should always be left free to move with changes of humidity and temperature. Then the roofs were snapped back and the operation was complete. I had made these improvements to two coaches in three hours of one evening and twenty minutes of the next. For fifteen shillings I now have two very presentable coaches as a start on what may one day be a complete layout, if and when I can escape from commitments in other scales.

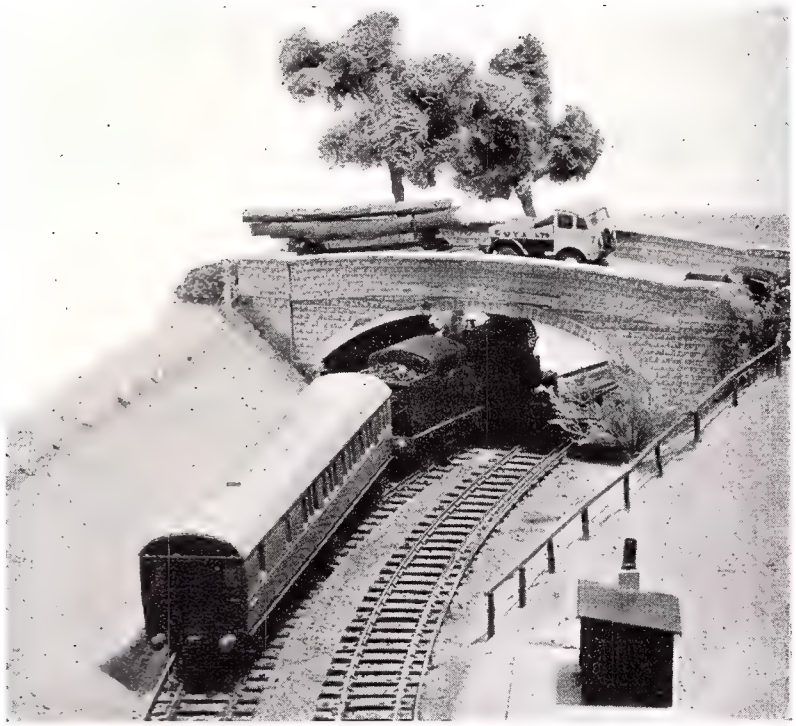
OTHER POSSIBILITIES

As a matter of interest, I experimented with a file on the windows of another coach. The glazing strips were removed and the roof was replaced to steady the side walls during the following operation, which was to file all the window openings square, to provide a contrast with the wide-radiused curves of the new B.R. standard stock on which the Tri-ang models are based. I originally intended to apply thin paper strip panelling around the windows, but at the last moment I got cold feet, and decided to be satisfied with paintwork to represent the moulding on the sides. The sides were painted umber and cream, and lined with indian ink around the windows, as shown in Fig. 3. For this lining I used a Pelican "Graphos" ruling pen, well known to draughtsmen. This instrument is an excellent one for lining in rolling stock, as the thickness of the line can never vary. For the occasional modeller, however, the price would be too high. The plastic roof was discarded, and a new one of "clerestory" pattern, made from obeche strip-wood, was used in its place. The interior fittings were provided as in the other vehicles, and the general effect is quite satisfactory, bearing in mind that this is not a prototype job. The time taken for this particular conversion was about six hours in all.

DO IT YOURSELF, No. 18

CURVED BASEBOARDS ON THE WILMINGTON VALLEY LINE

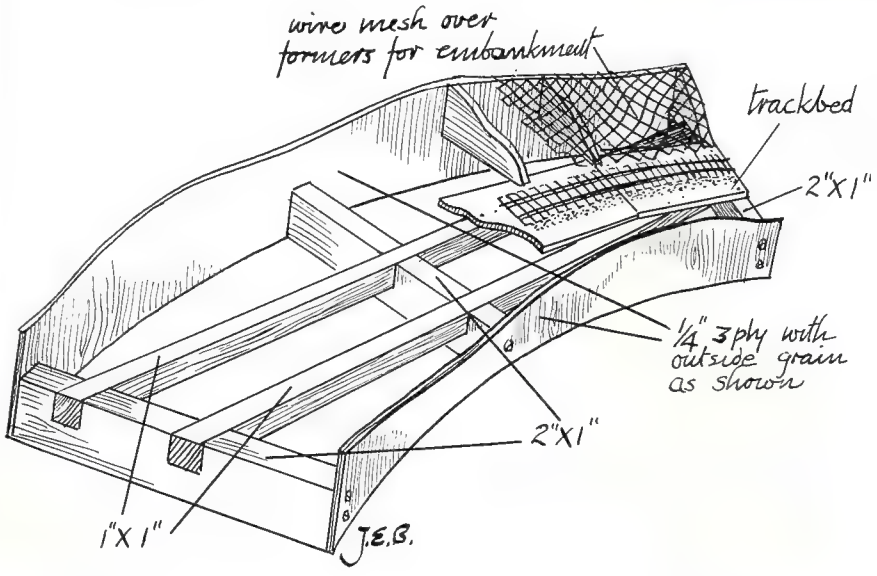
by J. E. Bridger



This photo shows the curved section on Mr. Bridger's "OO" gauge semi-portable layout.

UNTIL I saw a section of Mr. Denny's layout at last year's Model Railway Exhibition I had not seen a baseboard similar to the kind I have used on my own layout. The usual way to take a line round a curve is quite naturally to cut diagonally across the baseboard or introduce a triangular section, which will be considerably wider than the rest of the layout need be. Bearing in mind this fact and that I wanted light and portable sections, I decided when designing the Wilmington Valley that a curved section would need less storage space than this normal method, and so four sections were used to carry a 3ft.-radius line round to Hoadswood from Wilmington.

I started the first one by drawing a full-size plan-cum-template of the section on paper and laying two lengths of 1in. x 1in. across in a position which would give the best support to the track-bed. These were cut off at each end at the correct angle and three pieces of 2in. x 1in. were then laid, one at each end and one in the centre of the template. These were cut ½in. shorter than the eventual width so as to allow for the ¼in. plywood edges. The 2in. x 1in. members were then cut to receive the 1in. x 1in. (careful cutting is called for here so as to end up with the correct angle at each end). This assembly was then fixed together by screwing from underneath with 1½in. No. 8 screws. A little packing with card on some of the joints will help matters if it does not lie flat at first. The important thing is to get the top edges all level with one another.



The next stage was cutting the sides from ¼in. plywood with the main grain running the width instead of the length. This made for easier bending. The top edges were contoured to conform to the already planned scenic effects and they were lightly pinned into position before cutting to length. It would have been easy to cut them too short if I had not fixed them first. The pins also were to hold while I drilled for the screws which were the actual means of fixing the sides securely. Do not make the same mistake as I did, however, of putting a pin where it fouled the screwhole and drilling into it for five minutes before realizing why the drill seemed blunt! The screws each end were also positioned so as to fix the hinges which join the sections together.

After that it was only normal routine to lay the track and build up the embankments to the edge of the ¼in. plywood. I used ¼in. ply to give a fixing edge for the wire mesh. It would not have been easy to drive pins into the edge of anything thinner. Offcuts with the grain going crosswise are, however, quite easily and cheaply obtained.

With a track radius of 3ft. and a baseboard 1ft. wide my four sections are each about 2ft. 6in. long. I have purposely laid the track off centre in order to break up the otherwise stiff appearance of the track running parallel to the edges.

According to how wide one intends to construct this kind of section so will its maximum length be decided by the radius used, as with a small-radius curve there is a limit to the placing of the lengths of 1in. x 1in. timber. By careful matching of the hinge positions, however, I can assemble the layout either in its complete form of a "U" or, when space demands, in the form of an "L."

THE STORY OF TWO "BULLDOGS"

by A. S. Taylor

Drawings by Eric Longbottom

Being the detailed description of the construction of a super-detailed prize-winning pair of 4mm. scale models.

(*concluded from page 115 May issue*)

TENDER BODY (continued)

We came now to the tender sides. In order to avoid the difficulty of ensuring that the two vertical corner bends at the rear of the coal plate assembly came in exactly the right position, we constructed the sheeting in two portions. Each consisted of a complete side plus half an end, and I believe this actually conforms to prototype practice. Perhaps once again the construction of these sides can best be dealt with in sequence form.

(a) A strip of .010in. nickel silver was first prepared, the width being some 2in. greater than the height of the tender sides, and the length, say, 1in. more than that of the two sides plus the end.

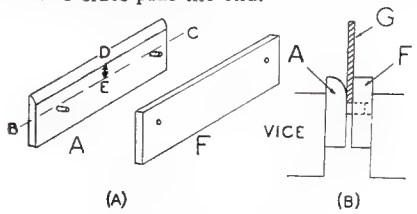


Fig. 35. Bending jig.

(b) We had first to form the outward flare at the top of the sides and the end. To do this, a simple bending jig was constructed from two pieces of thick duralumin that happened to be in stock. Steel plates would have done equally well, and at a pinch perhaps even hardwood could have been made to serve. The top inside edge of one piece A was carefully rounded with a file to a rather tighter radius than the flare, and tests were made by bending an odd piece of .010in. nickel silver round this until the curvature conformed with the blueprint.

(c) A line BC was now scribed along the dural, the measurement DE being the distance between the bottom of the tender side and the commencement of the flare. Two small dowel pins of No. 70 steel wire were next fitted into the plate about 1in. from each end with their upper surfaces on the line BC.

(d) The nickel-silver sheet referred to in (a) above was now placed in position with its lower edge resting on the steel dowels. The second half of the jig, consisting of a plain bar of duralumin with right-angled edges and two holes to slightly clear the protruding dowels in part A, was now placed on top of the nickel, being careful not to disturb the line-up, and the whole "sandwich" was placed in the bench vice. The second half of the jig is shown as F in the figure.

(e) A further bar of metal was now placed along the exposed length of nickel silver G and pressure applied to it with both hands to round it over the prepared edge of A. It will now be evident why, initially, the metal was left some 2in. higher—to obtain the necessary leverage for bending G.

(f) Having now produced one long length of the right outward flare, the surplus 2in. were trimmed off to bring the sides to their correct height.

(g) Our flared strip was next cut in half and the positions of the vertical bends at the rear of the coal plate were marked on each, taking care that there was a small surplus of metal at either end to allow for adjusting after bending.

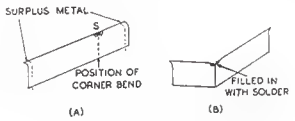


Fig. 36. Bending corner.

(h) Right-angle bends were now made at these markings, but before doing this, in order to ease round the flare without it buckling, a few small saw cuts were made in the flare at either side of the vertical marking. The ends could now safely be bent round, producing the fan-shaped effect shown. It was, of course, necessary to fill with solder the small gaps created by the spreading of the saw cuts. These were cleaned up to final shape forthwith and the corners slightly rounded.

(i) Holes were drilled for the corner handrails, working from the inside of the bend. This prevents the drill wandering laterally and ensures that they are vertically above one another.

(j) Each side with its half end attached was now trimmed to exact length, ensuring that the two ends met at the central point of the tender back, and that the join was truly vertical. These were now soldered into position around the interior assembly, and the edge beading of half-round wire was soldered on and carefully cleaned up. Scrapers are an essential for this job.

(k) To complete the platework, the extensions on top of the tender sides were cut out, again together, and filed to shape and beaded at this stage. After cleaning up they were attached in position on the body. It is useful to make a preliminary tack where they butt at 90° to the coal plate, and thereafter to draw the iron along the joint from the inside.

(l) The two small guard plates behind the tool boxes were now put on and the corner handrails placed in position and soldered from the inside.

So much then for our tender top. We were now in a position to add the various turnings, together with the tool boxes and fire-iron support. As previously mentioned, the stubs of these passed through holes in the coal plate that we had previously located. The pilot holes were now opened out to suit the stubs and soldering took place on the underside of the coal plate.

Fig. 37. Water pick-up dome.

In the main, I do not think that these fittings call for special comment, since they were taken from the blueprint and turned accordingly. The diagram shows the make-up of the water pick-up dome. This passes through a separate circular plate riveted around its perimeter to give the final effect of a riveted flange.

The tool boxes were shaped from solid brass bar and attached to the tender by 8 B.A. bolts, screwing up from underneath the coal plate into tapped holes on the undersides of the boxes. The lids were of thin nickel silver sweated on with Fryolux and the hinges were made from nickel-silver strip.

In the case of the tank filler, the hinges were added to the turning in a similar way to those on the locomotive smokebox door, i.e. using a U-shaped piece of metal and thereafter trimming off the base of the U.

When turning the brake and water pick-up standards the No. 70 hole for the handles at the top was drilled into the rod before turning to shape. It is a far easier job to drill a small hole in a ¼in. rod than

in the tiny top after it has been turned to size, for the drill will almost certainly wander in the latter case. It remained only to unite the completed tender top with the footplate unit, first taking care that the two standards were soldered in position, and once this was accomplished the actual handles to these items could be affixed.

The narrow beading strip at the bottom of the tender sides that passes right round the back was sweated on at this stage, and the prominent handrails at the front of the tender completed the task, apart from lamp brackets and the vacuum brake pipe. These handrails were formed from No. 70 piano wire and are let into the footplate for strength, being touch soldered underneath.

THE STEPS

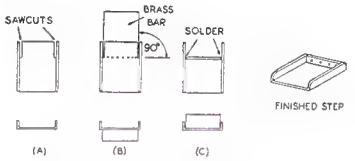


Fig. 38. Steps.

Tender and loco steps of any given size were made by forming a channel section equal in tread width and flange depth to those of the required step from a strip of .010in. nickel silver.

At one end of a short length of this section, two fine saw-cuts—one each side—were made in the tread as close to the side flanges as possible. The length of the section was approximately twice the step length, and of the saw-cuts about twice the flange depth.

The end of a brass bar $\frac{1}{8}$in. thick and a little narrower than the internal width of the step was soldered symmetrically to the back of the sawn end of the section. The end of the bar was at 90° to the section. Careful levering of the brass bar through a right angle enabled the back flange of the step to be formed, after which the bar was removed and the small gaps between the side flanges and the back flange were filled in from behind with solder.

The back flange was then riveted. This was done before it was reduced to its correct height, since riveting so close to a finished edge, as would otherwise be necessary, would lead to distortion.

The steps were completed by removing surplus flange material, cutting to correct length, rounding the corners and cleaning up.

PAINTING

We now come to the ultimate and vital stage in the story of our locomotive—the question of painting. As previously indicated, this model was to be spray painted.

I fully realize that the vast majority of modellers do not possess spraying equipment, though it is possible that they may have access to it, and these notes may therefore prove of interest. For the record, my own equipment is manufactured by Martindale Electric Co. Ltd., Westmorland Road, London, N.W.9, and consists of two main units, the gun itself with alternative jets for round, flat and angle spraying, plus a separate rotary vane compressor. It is an excellent production around the £25

The completed tender.

mark, and is in addition completely portable, and well equipped for general work in the house or on the car. In any event, these latter two considerations provided a salve to my conscience in purchasing the equipment, and I have certainly never had cause to regret the step. An additional feature of this equipment is that separate spare parts are obtainable down to the smallest washer.

When spraying previous models, I had found a tendency for the cellulose to chip and peel away from the edges of the work with subsequent normal handling. Cellulose is in effect a "skin," and I felt that some form of binding undercoat was now a necessity. Upon the recommendation of Mr. Evans, of Bearwood Model Supplies, Birmingham, I tried a red nitro-cellulose primer supplied by Messrs. Thos. Parsons & Sons Ltd., 20 Hockley Hill, Birmingham, 18, and I can heartily endorse his opinion of this product. It sprays beautifully and certainly does form a key between the bare metal and the subsequent finishing coats and to date has proved the complete answer.

The painting was divided into the following stages:

(a) Washing the model in water and Tide to remove any grease and fingermarks, drying thoroughly, then avoiding handling if possible in direct contact.

(b) Spraying the whole job with red primer both inside and out.

(c) Applications of G.W.R. green externally.

(d) Masking that portion of the loco to remain green finally.

(e) Application of black cellulose inside and out.

(f) Stripping off the masking.

(g) Affixing of transfers, cleaning up polished parts, e.g. name and number plates, whistles, etc.

(h) Final varnishing.

At least twenty-four hours was left between each actual colour change to give the cellulose a chance to harden off. Having previously hurried at this stage, I am most firmly convinced of the undoubted advantage of these waiting periods.

Referring for a moment to the question of masking, this was achieved by covering up all the green portions of the loco (boiler, cab sides, etc.) with a product known as artist's masking paper. This is a thin, semi-transparent paper, rather like photographic dry mounting tissue to look at, that will adhere to cellulose yet will come away again without harm to the surface of the paint. Originally I obtained this from a firm of commercial artists in Bournemouth, but I have not since succeeded in locating another source of supply. Failing this, it is possible to use ordinary economy labels, though this tends to dry out and lift if left on for any length of time. There is, however, a third alternative that I have recently used for masking a wagon roof. This is "Scotch Boy" drafting tape No. 230. This tape works very well, and does not harm the paint, but, owing to the fact that it is much thicker than the masking paper, it is more difficult to use to mask, say, the splashers or other small surfaces.

Sellotape cannot safely be used, for it will almost certainly pull away part of the paint.

After spraying the black over the masked locomotive, the model was placed in a bowl of clean warm water, and left for about thirty minutes or so. Thereafter the masking could easily be peeled away (some in fact had floated off), with no damage to the surface underneath.

The name and number plates were completely blacked in, and before varnishing a scraper was passed over the surface of both, taking away the paint lying on the raised portions and revealing the naked brass while leaving the background in black.

The final varnishing was accomplished with a mixture of gloss and matt finish, the approximate proportions of this mixture being gloss and matt varnish (combined fifty-fifty) 25%, cellulose thinners 75%. A heavier proportion of varnish tends, in my experience, to give a fairly roughened surface, through the laquer not being fully atomized and tending to float on in a dry state. The ordinary cellulose colours, I find, are best diluted with an equal quantity of thinners for spraying. This is, of course, only a general guide and proportions may vary with other equipment.

(Conclusion)

SWITZERLANI
THE RAILWAY MODE

by C. L. Fry

Left : 36-passenger (standing) car on Trubsee Gerchenalp Telepherique arriving to collect passengers. This telepherique at one part of its journey has the longest rope span in Switzerland, approximately 3,650ft., without intermediate support !

Facing page, from top to bottom : S.B.B. high-speed RE/4/4 B.B. class 2,500 h.p. electric locomotive. Note springs of axleboxes of both coach and locomotive. See text.

Latest S.B.B. 6,000 h.p. CC type Canton class locomotive after its long climb with sixteen-coach train in Goschenen station prior to entering the Gotthard tunnel.

Rhetian Railway metre gauge train on sharp curve climbing to Alp Grum on a grade of 1 in 14, the highest cross-European railway. It has never ceased service even through 21ft. of snow, when the overhead was below the level of the snow !

Trams with tiny trailers of the type referred to at Neuchatel.

Below : interior of coach on Box Villers Bretaye train. Just look at the sharp curve this train is on, and furthermore this B.B. type locomotive takes it up a maximum gradient on the rack-assisted portion of the line of 1 in 5 !

TO the railway modeller, there is no country in the world to equal Switzerland, for in this small country, measuring only approximately 220 miles in extreme length by 140 at its widest point, there are nearly 4,000 miles of various types of railways and tramways. In fact it would appear that the Swiss only need an excuse to build a railway, no matter what difficulties have to be overcome. There are standard-gauge lines with 11,400 h.p. locomotives, narrow-gauge lines with 2,500 h.p. locos, rack railways, telepheriques, chair lifts and funiculars to the tops of mountains, and even private lines to hotels.

Locomotives are very varied, from the most powerful in the world, the huge articulated 11,400h.p. electric locomotives of the Gotthard line, to electric motor coaches, steam engines and diesel-electrics. Rolling stock is largely international, and one can see some of the latest 86ft. 6in. German State Railway coaches, the longest in Europe, the new corrugated stainless steel sleepers of Wagons Lits, and the small tram trailers of Neuchatel ; in fact everything the modeller could desire is there.

Those who are fortunate enough to go to this wonderful country will find, apart from the amazing scenery and railways, that they will have no difficulty in making themselves understood, for nearly all railwaymen speak English, and numbers of them come to these islands each year to perfect the language. They will go to no end of trouble to try to answer queries, and if not understood a notebook and a few rough sketches do the rest.

To have the thrill and the privilege, as I have had on many occasions, of travelling on the locomotives is something never to be forgotten. From the older type 4-8-2 or 2-D-1 (whichever nomenclature is preferred) 3,300 h.p. to the right-up-to-the minute 6,000h.p. C.C. type they are perfection in every way. I have been lucky enough to have had a footplate run on one of these latter locomotives from Lucerne to Lugano right through the famous Gotthard tunnel.

In the cab to the left of the driver is a recording tachometer, which records on a seperate sheet for each trip every movement, speed and distance made by the locomotive. It shows at a glance if speed limits have been observed. Also to the left of the driver is a small adjustable illuminated easel, on which is the sheet from the working timetable for the train concerned, together with an electric clock, so that the driver knows at a glance if time is being obeyed. One other item that must be mentioned is the red button on the control panel ; this is the automatic brake release, in use on nearly all main lines and on some narrow-gauge lines. All main lines of the S.B.B. and Rhetian metre-gauge railways are fitted for automatic control, which consists of a magnetic device situated at all signals to operate a magnetic relay under each locomotive. When a locomotive or power coach passes over one of these magnetic ramps a bang is heard, a slight shock is felt and a hooter blows in the cab, and if the driver does not press the red button within three seconds of hearing the bang the brakes go on throughout the train, bringing it to a standstill.

On my trip the locomotive accelerated rapidly, and soon speeds of 125 kilometres per hour were registered, the riding on the well-kept track being superb, much better than in a private car. After skirting the lovely Lake Lucerne we started to climb the long, twisty gradients and spiral tunnels of 1 in 37 which lifted us up to the Gotthard tunnel. In the middle of this gradient a bridge was being rebuilt and on it was a speed restriction of ten kilometres per hour. After the last coach of our sixteen-coach train had passed over the temporary structure the driver immediately

Prototype of the Month

'S PARADISE

started to turn the twenty-four-notch speed control wheel. As each notch was turned our giant gained speed and in a matter of seconds was again climbing this gradient with our enormous train of between 700 and 800 tons at sixty kilometres per hour.

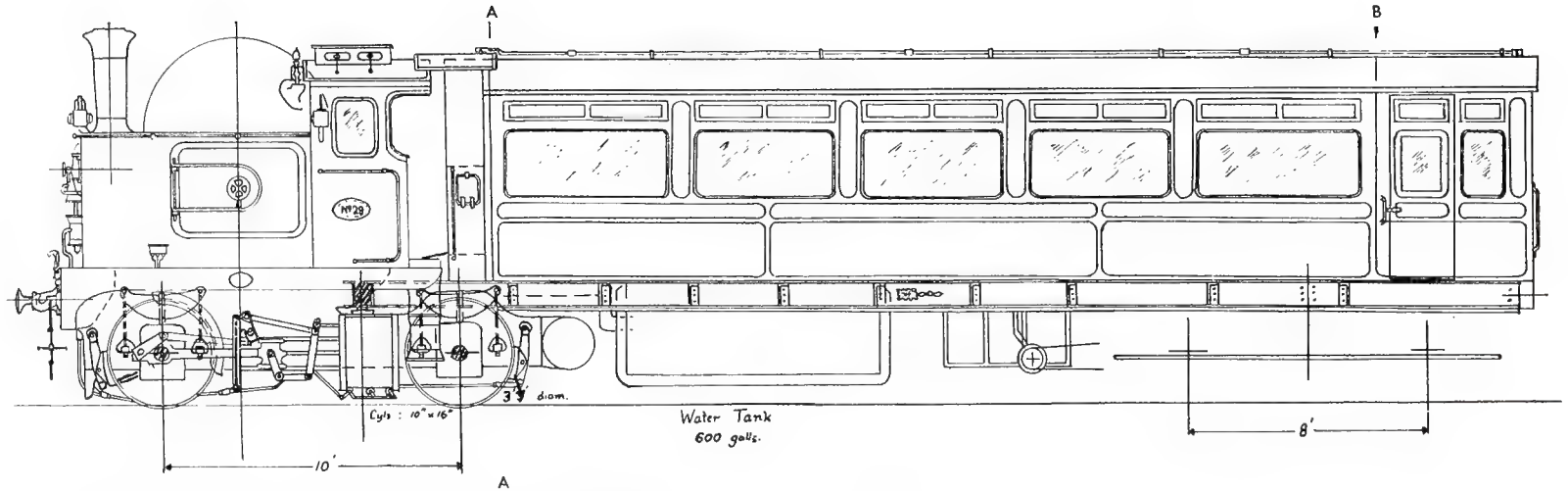
High speeds and the very smooth running are attained through the well-laid and wonderfully maintained trackwork, which would appear to be made up of standard parts with very few exceptions, the most unusual being in the approaches to Zurich, where there are laid the most remarkable outside double slips I have ever seen. Here the centre rail of the two curves becomes one single common rail in the centre of the slip.

A point of extreme interest in the modern Swiss rolling stock, both locomotives and coaches, is that the axleboxes are not fitted to horns (which naturally carry lateral movement to the body of the vehicle, particularly when running on wavy track), but are attached to the vehicle by a large rectangular-section spiral spring on each side of each axlebox, thus leaving the axles free to move irrespective of the bogie frames, the result being a perfectly smooth riding vehicle. Should I not have made all this quite clear, the photographs of the S.B.B. locomotive and coach show what I mean. I understand that the Southern Region of B.R. is about to experiment with similar bogies. Not only smooth running but also noiseless running is a feature of the twenty-wheel (or ten-wheel bogie) and sixteen-wheel (or eight-wheel bogie) rubber-tyred coaches. When travelling in one of these vehicles one would hardly realize it was actually moving were it not for what is seen through the window, which in fact might be a scene painted on canvas unfolding itself.

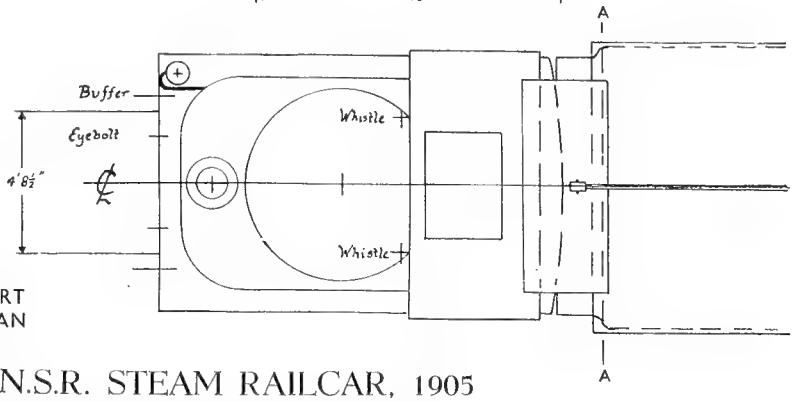
Then again I have been privileged to travel on the metre-gauge Glacier Express of the Fauker Oberalp Railway. During the 160-odd miles of its journey it is lifted at the Furker tunnel to a height of 7,088 feet, more than twice the height of Snowdon, and again to 6,690 feet at the Oberalp Pass. During the busy season trains of nine coaches, including a dining car, are worked on this railway, which is ordinary adhesion-worked up grades of approximately 1 in 30. In places rack is used to assist the locomotive when up grades of 1 in 9 are worked. Just imagine a dining car on such a grade and you will realize how amazing are the railways of Switzerland. Similar gradients are worked by S.B.B. metre-gauge line through the Brunig Pass from Lucerne to Meiringen, but in this case I have been on a train of 12 coaches.

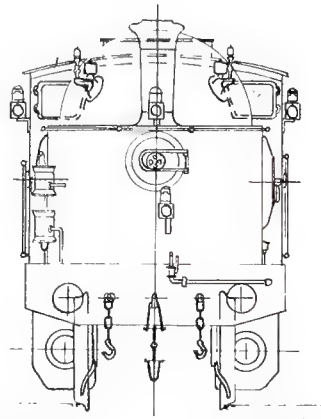
Further, a railway bridge is dismantled when an avalanche is expected and reassembled as soon as it has passed. The bridges are folded away in sections, just like a portable model railway. For variety and interest Switzerland is truly a paradise for railway modellers.

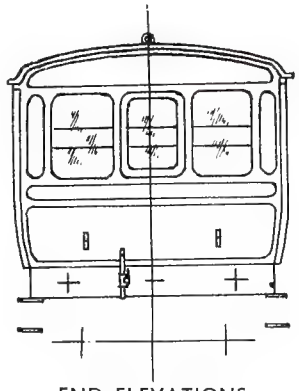
SIDE ELEVATION



PART PLAN







END ELEVATIONS

All drawings scale 4mm. to 1ft.

G.N.S.R. STEAM RAILCAR, 1905

Drawing and notes by J. A. N. Emslie.

Steam railcar, 1905. Class W.

Engine : A. Barclay and Sons, Kilmarnock. Nos. 29, 31.
Coach : G.N.S.R. Inverurie—46 seats. Nos. 28, 29.

Drawings give side elevation of unit, plan of locomotive, end elevations of locomotive and coach (driving compartment). Scrapped 1907, when coaches converted to 40' 7" saloon 3rds.

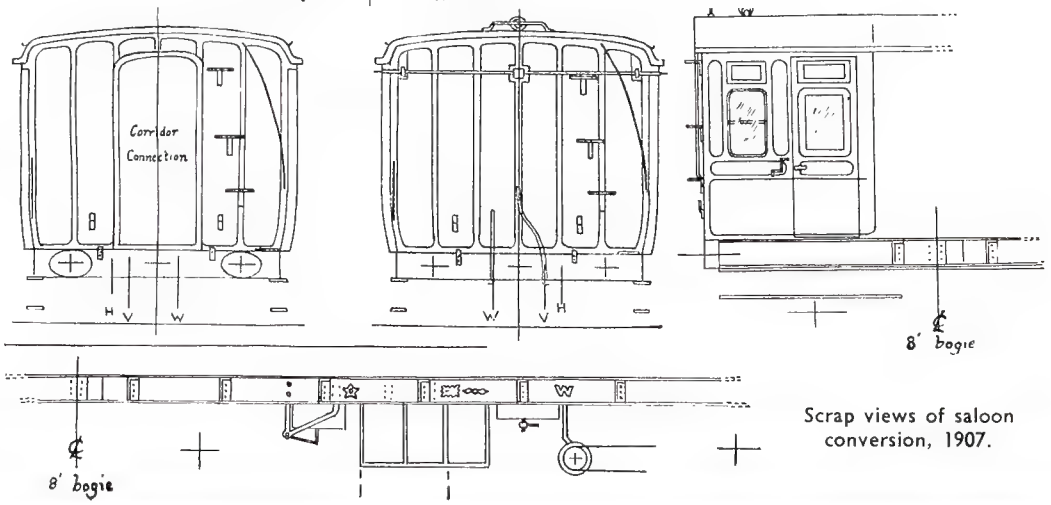
40' 7" bogie saloon 3rds, Nos. 6, 7.

G.N.S.R. Inverurie, July 1907. L.N.E. 7651/2, B.R. SC 7651/2 E.

Scrapped July 6, 1954.

48-seat saloon, lavatory. 21t. 8c. Dual brakes, electric light, steam heating.

To obtain drawing use coach unit plus side elevation of 1907 locomotive end. End elevations, 1907, of driving compartment and locomotive ends are given, as is new underframe detail drawing. Note that at A and B on side elevation there is the same body narrowing as shown in the plan of the locomotive at A—A.



Scrap views of saloon conversion, 1907.

PECO TOPICS

LAYING PECOWAY TRACK

THE laying of Pecoway track is in point of fact simplicity itself, so much so that instructions are hardly necessary at all! Nevertheless, there are certain points where a little "know-how" simplifies the job considerably and produces an even better result.

As most modellers know, Pecoway is provided with scale fastenings on every sleeper, and thus is extremely strong, while still retaining the true fine appearance of the prototype. In addition, it is now provided with metal clips which serve further to strengthen the assembly and simplify curving. With a track of such scale accuracy, it is important that the softboard baseboard surface should be properly prepared to enhance its appearance.

For this purpose the easy-to-use, clean Peco Ballast Underlays are provided. These are supplied in 9in. lengths, 2in. wide, in straights and curves of 18in., 24in. and 36in. radii, and with these any track formation can be accurately ballasted. For double tracks, two Ballast Underlays are laid side by side, providing the correct 6ft. way for multiple tracks. When doing this it is advisable to stagger the joints as in brickwork. This "bond" reduces the effect of the joints on the finished track. The underlays are glued in position with Acrabond and when completely set roughened with a fine wire brush—a suede cleaning brush is remarkably effective in this respect. The cork dust thus produced can be saved and used for innumerable jobs about the layouts where loose ballast is effective.

Mention should be made of the new ballast slopes. These are 9in. cork strips, 2in. wide, tapering from $\frac{3}{8}$in. to a feather edge, and are primarily intended for joining Pecoway to proprietary sectional track, but have been found to be equally useful at the beginning of gradients, providing as they do a gradual start to the incline before the thicker rising sub-base begins, thus eliminating the tedious and often difficult task of producing an even taper in a piece of softboard.

No special shapes are provided for points, as each section of pointwork must be dealt with according to its precise requirements. In many cases, particularly in station yards, the simplest solution is to place a large number of straight ballast underlays side by side, ignoring the exact configuration of the tracks except at the outer edge, for it is customary on the prototype to ballast completely over these sections of ground.

When laying straight track, Pecoway should be used as supplied from the manufacturers, except, of course, for any cutting to length to fit the site, but except in stations it is preferable to lay all tracks in gentle undulating curves rather than on a rigid geometrical formation of fixed radii and absolute straights. Not only is tracklaying of this nature more realistic, it is also somewhat easier!

The standard 18in. lengths of Pecoway can be readily cut to fit any desired location. The only tool needed is a metal cutting saw with a very fine tooth: for this purpose the Trix X-acto Razor Saw is unequalled. It is not advisable to try to hurry the cutting, for the web of the rail is so fine that the saw blade can easily catch and drag the rail. Rather the saw should be allowed to cut through the metal by its own weight.

To curve Pecoway, the web joining the individual sleepers should be cut away on one side only between every other sleeper. The track should then be laid down on a level surface and gently eased into the required curve with the fingers, at all times keeping the track pressed gently but firmly on the base to prevent it twisting. Where sharp radii, below 24in.—30in., are required, do not try to make the curve in one go. Begin by curving to, say, 30in. or thereabouts, and then curve this curve still further at a second or even third stage.

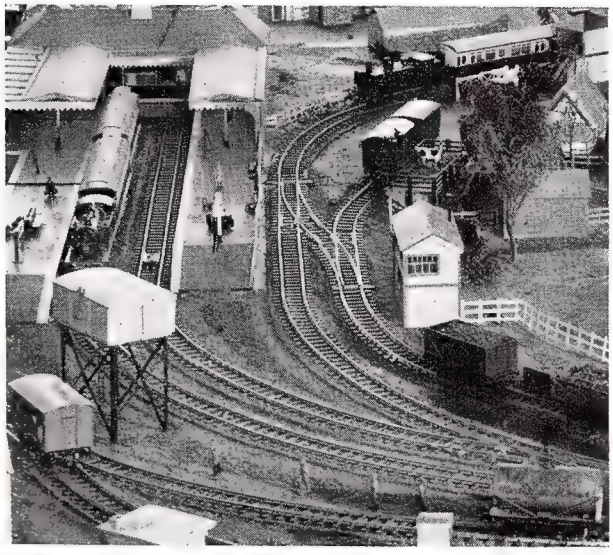
We are frequently asked about minimum radii, and would mention here that Pecoway has been successfully used for tramway layouts with 6in.-radius curves—the question of minimum radii really depends on the rolling stock used. Radii are measured to the track centre line, but only when these are approaching the absolute minimum for the stock used—15in. for most "OO" gauge equipment—is it vitally necessary to use templates or trammels to ensure precision. It is more important to ensure that the track is free from kinks and irregularities, and to do this there is no better method than that used by the prototype platelayer, looking along the rail. Unfortunately we cannot always place our heads close to the track, as he can, but we can put a small pocket mirror on the rails and thus get the same effect. Any small imperfections will be instantly detectable by this procedure. This is very important, for not only can a small irregularity lead to poorer running, but a photograph will almost certainly pick it out immediately; indeed, it is surprising how quick the lens is to find minor points of this nature.

Inevitably, when Pecoway is curved, one rail, the inner one, will be too long. The surplus may be cut off, but on occasions it is possible to balance two opposing curves so that very little rail need be wasted. As the sleepering will be short, additional A/132 sleepers should be used to make up the balance.

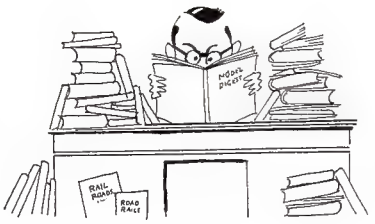
To secure Pecoway to the baseboard the small lugs holding the rail in position should be cut away on a few sleepers and Peco Fixing Spikes passed through the holes thus revealed. This fixing is virtually invisible; indeed, we have frequently found it necessary to point the spikes out to visitors. More important still, the fixing is made directly on the rail itself rather than on the sleeper. Pecoway need not be fixed very firmly to the baseboard, and on straight and gently curving track it is quite sufficient for it to be fixed four times per length, at six-inch intervals, but on sharper radii and on portable layouts a four-inch spacing is to be preferred. On sectional layouts the rails should be firmly spiked adjacent to the baseboard joints, for three or four sleepers.

Pecoway should be joined with Peco Rail Joiners, or Peco Scale Flat Bottom Fishplates. The Rail Joiners, being $\frac{1}{4}$in. long, make a more secure joint, and do not require any additional electrical bonding, but some workers prefer the scale length fishplates as being finer in appearance.

Due to the length of the Rail Joiner, it is not possible to contain it wholly in the space between two sleepers, and for this reason it is suggested that the rail joint be located directly over a sleeper on one section of Pecoway, or that an A/132 sleeper be used between the ends of the Pecoway sections. The Rail Joiners are provided with lugs which can be pinned or spiked to the sleepers and thus provide a firm fixing at the very end of the track.



BOOK REVIEWS



THE RAILWAY STATION, by Carroll L. V. Meeks (Architectural Press, 60/-).

Taking as his theme a quotation from *Building News* of 1875, "Railway termini and hotels are to the nineteenth century what monasteries and cathedrals were to the thirteenth century," Mr. Meeks has set out to describe and evaluate the larger urban stations in Europe and North America, while at the same time attempting to emphasize the underlying unity of nineteenth-century architecture. In his first aim he has succeeded magnificently, but we have our doubts about the second point. We are to some extent handicapped by the fact that we opened the book in full agreement with this proposition; indeed Mr. Meeks adduces as part of his preliminary argument the fact that laymen tend to lump all the revivalist movements in architecture together—in Britain this is done under the generic term "Victorian." We do, however, feel that any architect who held opposing views would be justified in claiming that the underlying unity springs from the common origins of all the buildings described.

Mr. Meeks uses the term "picturesque eclecticism" to describe the nineteenth-century style, by which he means that architects were borrowing from earlier styles such features as would add variety, movement, irregularity, intricacy and roughness of texture to their structures. Certainly one can without any difficulty discover all this in any well-designed building of the period; the fact that details were borrowed from an earlier style—or in extreme cases styles—is less important than the underlying ideal expressed in the design.

Turning now to the principal object of the work, the recording of the large station's architectural history, we can only repeat that the book is a magnificent *tour de force*. While one may disagree with some of the author's conclusions, one cannot but admit that the choice of examples is extraordinarily complete. There are 231 illustrations in the plates, and several line sketches in the text, which accounts for 166 pages. There are in addition an extensive bibliography, a comparative list of train sheds and a very comprehensive index.

We are left in no doubt as to the author's love of train sheds—the large overall roofs which up to recent years were almost obligatory on any large station. These structures are undoubtedly romantic, and it is sad to think that they are doomed by economic considerations, particularly now that electrification and dieselization have banished the smoke and grime that dimmed their beauty. Nevertheless, we cannot agree that the present umbrella roof is quite as bad as Mr. Meeks makes out, unless the design in the U.S.A.—for he is an American—is considerably worse than that in common use in Britain, for without a doubt it does protect the traveller from rain, even in our damp climate, but is certainly not so effective a preventive of draughts, as a visit to New Street, Birmingham, on any windy day will show.

In a work of this nature it is inevitable that some omissions must be made—to mention every station would be next to impossible—but the selection has been carefully made. That some errors should exist is understandable, but such as do exist are of minor importance and do not affect the subject matter. For example, the importance of St. Pancras station as an architectural subject is not affected by the fact that it is not, as the author states, the principal station for the Highlands!

This book is a very welcome addition to the enthusiast's bookshelf. The text is easy to read, but closely argued—indeed we found it stimulating, for it brings home many factors of design and serves to arouse one's interest in railway architecture. The illustrations contain many useful sections of overall roof girders, while many of the drawings of early stations provide ideas for models.

101 TRACK PLANS, by Lyn Westcott (published by Kalmbach Publications, U.S.A.; distributed in Great Britain by Bradshaw Model Products Ltd.).

This collection of plans contains a graduated selection taken from the pages of our well-known contemporary the *Model Railroader,* and as such is an interesting commentary on the basic difference between the American and British approach to layout design. While the smaller layouts, particularly those on 6ft. x 4ft. and 8ft. x 4ft. bases, are substantially similar, the larger-sized layouts seem to be based on somewhat different principles to ours. It is significant that all these plans contain a large number of stations, and while the larger plans follow prototype practice the tendency is to model a system with simplified stations rather than, as we do, model one station as faithfully as possible within the area at our disposal.

The plans are all drawn so that they can be scaled for any gauge from "O" to "TT," and notes on adapting them to suit alternative sites are given. They are, moreover, drawn to take N.M.R.A. standard points (switches) and thus need slight modification to suit British equipment, though the N.M.R.A. No. 6 and the British "OO" 36in. radius points are so nearly identical as to enable some schemes to be used with only the slightest of alterations.

Bradshaw Model Products are in addition supplying *Track Plans for Model Trains,* which contains a number of plans for sectional tracks. Here again American standards are used, and although the general ideas are largely possible with the use of British components the absence of a British 90° crossing is a distinct limitation in most cases.

A.B.C. OF LONDON TRANSPORT RAILWAYS (Ian Allan, 2/6).

The latest edition of this popular work brings the L.T.E. story as near up to date as is possible, though when dealing with so progressive a concern as the Underground railways of London alterations are bound to take place as the book passes through the printers.

The study of Underground rolling stock is a fascinating and, for Londoners at all events, fairly easy one, as one can readily see all the types of stock described, with the exception of the service stock, in a single day. However, the ability to distinguish between the various Q conversions on the District, or to select the finer distinctions between the rolling stock, comes only with study. Realizing this, the compilers have given us extensive notes on each class in addition to the usual number lists one associates with A.B.C.s. These lists, incidentally, include not only the multiple-unit stock and locomotives but also the Metropolitan locomotive-hauled coaches. Altogether, this booklet represents excellent value for money.

WORLD'S SMALLEST PUBLIC RAILWAY. A guide to the Romney, Hythe and Dymchurch Railway, by P. Ransom Wallis (Ian Allan, 2/6).

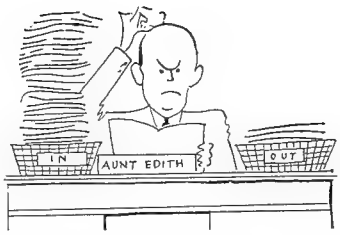
We are never quite sure whether the R.H.D.R. is a very large miniature railway or the smallest of all narrow-gauge systems. Indeed, the dividing line has never been satisfactorily drawn, for while on the one hand "scale" locomotives are used, on the other the line was built as a light railway, is properly signalled and the coaches are correctly designed narrow-gauge vehicles and not scaled-down replicas into which the passenger has to climb as best he may.

At all events the R.H.D.R., since its opening in 1927, has been a favourite with railway enthusiasts, and many a club outing has been made to visit the line. Indeed, now that a museum and model railway have been established at New Romney the visit is doubly worth while.

This guide contains a brief history of the line, a topographical account of the railway and a detailed description of the locomotive stud. It is profusely illustrated with excellent half-tones, many taken from the author's own photographs. This book is more than just a guide, it is an excellent introduction to this attractive railway and a fine souvenir for all who have visited the R.H.D.R. and fallen under its unique spell.

ADVICE BUREAU

Queries should be addressed to the Peco Technical Advice Bureau, Pecoway, Station Road, Seaton, and should be accompanied by a s.a.e. and coupon on page x. We regret that we cannot prepare special designs for individual readers.



I have recently changed my Hornby-Dublo for two-rail Wrenn, and, not being an electrician, should like your advice on what book I could read to enable me to do my own wiring.

My aim is for a baseboard 4ft.×11ft., so could you please tell me what book I require in plans 1, 2, 3 or 4 as advertised in the RAILWAY MODELLER, *and what do you advise from the Hammant & Morgan range of control? I intend to make it a dual control with electric points, also a lighted goods yard.*

A.F.H., Birmingham.

There are two simple books on wiring that we can thoroughly recommend; one is Mr. Ley's *Cab Control,* the other John Ahern's book on two-rail wiring published by Hamblings. We have also dealt from time to time in the RAILWAY MODELLER with two-rail wiring and electrification, the most recent articles being those which appeared in the August, September and October numbers last year. Back numbers of these issues are still available.

We have never published any layout plans for a solid baseboard 4ft. x 11ft.; nor, indeed, do we recommend this type of baseboard for so large an area, considering it is far better to treat these large affairs as an open arrangement with access in the centre.

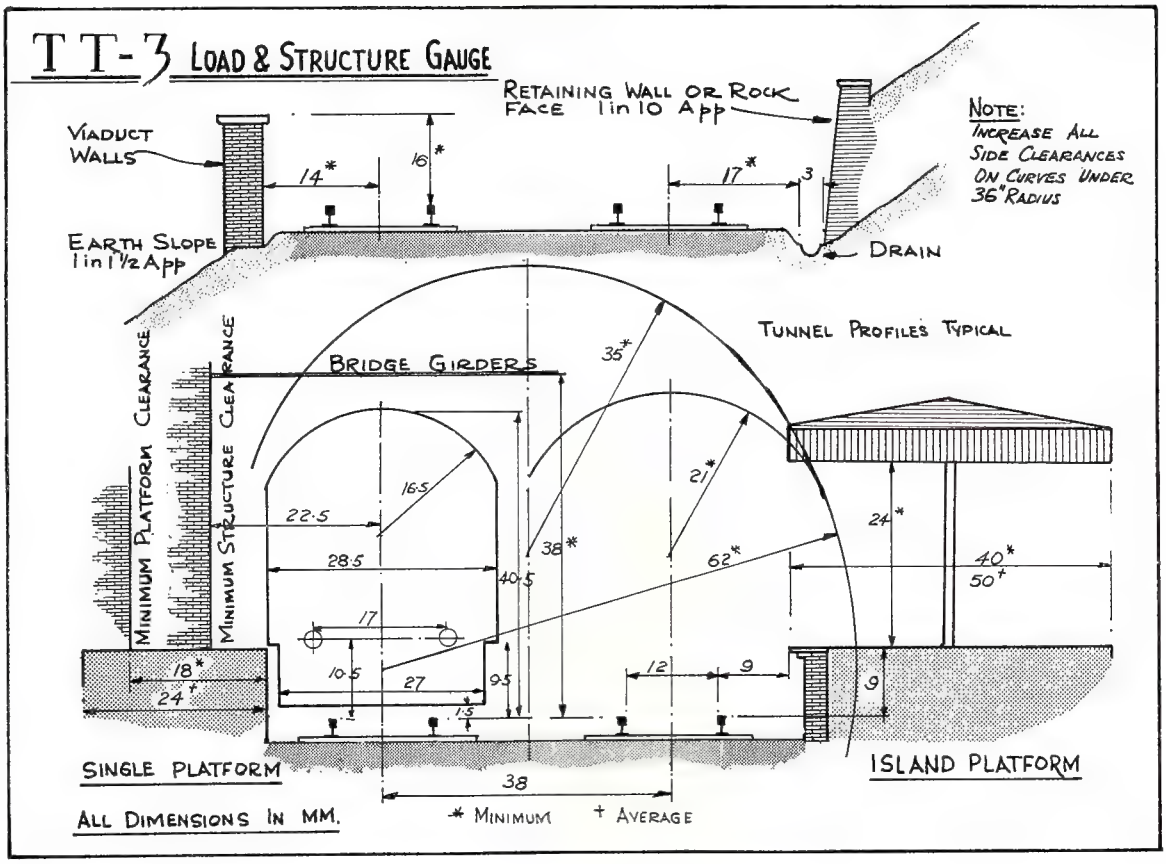
For your power unit we would recommend the Hammant & Morgan Minor Unit, either with or without vari-wave. This is an optional extra. You will require two of these, although only one need be purchased at the outset; but we would recommend that for lighting your goods yard a separate A.C. transformer be purchased from Peter Carter, who supplies equipment for lighting, as the permanent drain on the power unit by a fairly extensive lighting system is considerable, and it is advisable to draw from a separate transformer rather than risk starving the locomotives. Here again, this transformer can be purchased as and when you wish to install the lighting arrangements.

Will you please tell me if a Tri-ang locomotive will negotiate track and points to B.R.M.S.B. standards; also will a locomotive to B.R.M.S.B. standards run on Tri-ang track and points?

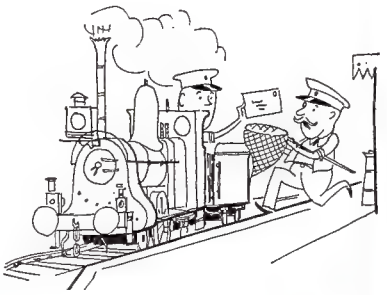
K.W.H., Stoke-on-Trent.

The Tri-ang wheel standards are totally different from those chosen by the B.R.M.S.B., and therefore the locomotives will not pass through B.R.M.S.B. points. However, the latest pattern Tri-ang points are universal and therefore B.R.M.S.B. locomotives will run to some extent over the track, provided they will take the very sharp curves. We would, however, advise you to convert right at the very outset to B.R.M.S.B. if you are at all interested in scale working.

In response to a large number of requests, we publish here a specially prepared load and structure gauge for "TT-3." Dimensions are based on the standard "OO" gauge figures.

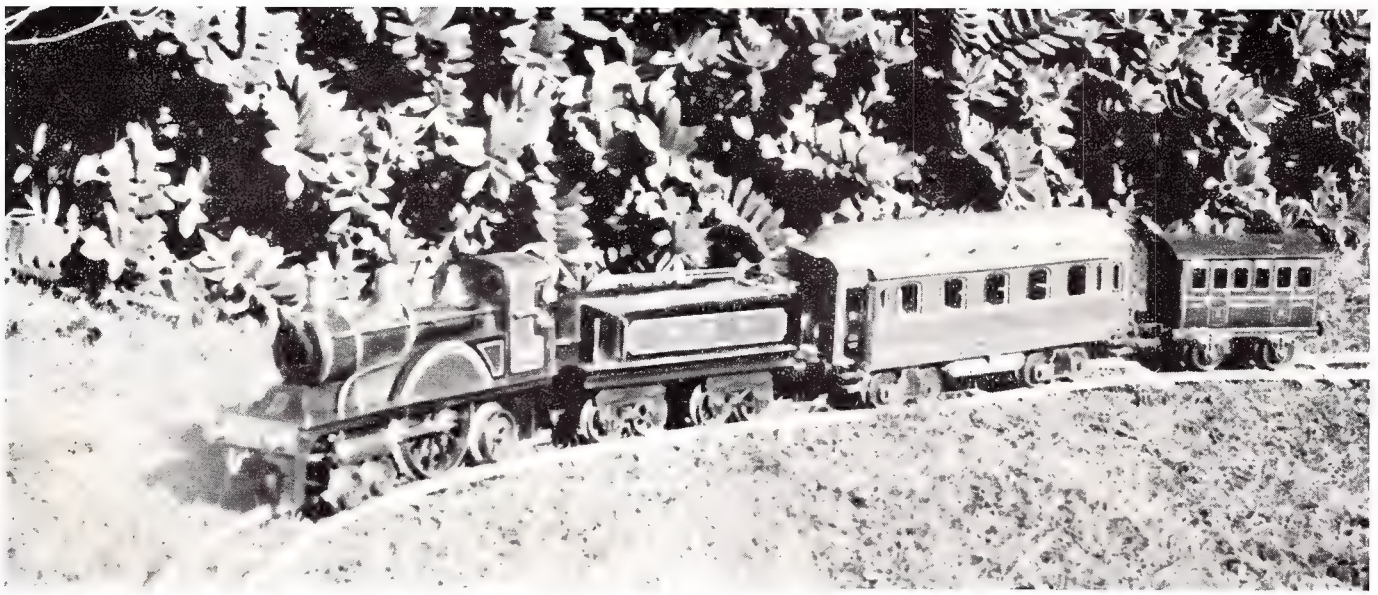


READERS' LETTERS



A free-for-all forum of ideas and opinion.

ANOTHER INTERESTING OLD MODEL



The enclosed photograph is of a steam 2in. gauge G.N.R. "single" and bogie tender, with some of the train, which is in my possession, together with a station building, a footbridge with signals and lamps which can be lowered, four of each, a station lamp standard, a 6ft. viaduct, a number of straight and curved rails, and five turnouts. The train has one bogie sleeping coach with detachable interior fittings, and two four-wheel coaches, one in G.N. brown, the other in green, all with hinged roofs.

I am impressed by the quality of the material and the workmanship of this old model, the brasswork of which gleams when polished. It looks very fine in the old G.N. colours, and has been much admired. I am not sure what the model represents. It has "steam-roller" wheels, but is fitted with coupled reversing valves, level-tap, water-gauge, and regulating tap on the dome. The funnel is detachable, presumably for oiling through the exhaust pipes which lead up to it. The station building is complete with detachable glass windows, and there is provision for interior lighting with candles! The seats in all the coaches have spikes thereon, on which the figures, dressed in period style, of course, were impaled in a sitting position! The engine and tender measure 21in. over the buffers, the height to top of funnel being 6½in.

M. K. HUGGARD.

Greystones, Co. Wicklow.

SIMPLE WAGON CONSTRUCTION

With reference to Mr. P. B. Denny's article in the April issue, I would like to add to his very good instructions on the construction of wagons in the section dealing with the brake gear.

I found this quite a problem until I purchased a Peco Wonderful Wagon kit, when I found that the surplus brake blocks which are cut off in the construction of the shorter wheelbase vehicles served excellently for brakes when glued to the wire as described in Mr. Denny's article.

I would also like to add a further hint for those who have an electric soldering iron, that is for melting the plastic of the Peco wagon after passing it through the floor of the vehicle just plug it in and wait until the first one melts, pull out the plug and melt the remainder.

Romford. R. J. DICKERSON.

THE AUSTRALIAN MODEL RAILWAY ASSOCIATION

This association was formed some six years ago to help the "old hand" and the "new chum" to get more from their hobby, and has grown steadily since that date.

Members receive a quarterly *Journal*, which contains items on full-size and model subjects, and a monthly *Buyers' Guide*, which tells what is available at various hobby shops throughout the Commonwealth, a copy of the standards which have been adopted by the association, and a membership list, which gives names and addresses of members both in Australia and overseas. In addition, any questions of a technical nature are forwarded by the secretary to experienced modellers who can help the inquirer.

State branches now exist in three states, and further branches are in the process of formation.

The New South Wales branch meets on the fourth Saturday of the month. Inquiries to the state secretary, Dave Ellis, 1 Tryon Street, Chatswood, N.S.W. (tel. JA7137).

The Victoria branch meets on the second Thursday of the month in the assembly hall of the Swiburne Technical College, John Street, Hawthorn. Inquiries to the secretary, Ian Weickhardt, 3 Mars Street, South Caulfield (tel. LF6206).

The Queensland branch meets on the third weekend of the month. Inquiries to the secretary, Dr. Stephen Suggitt, 20 Henry Street, Ascot (tel. B4334 or M6597).

Subscription rates are £1 per annum for seniors and 10/- per annum for juniors (16 and under). Further inquiries gladly answered by the federal secretary, Tim Dunlop, 103 Yarralea Street, Alphington, N.20, Victoria.

R. E. GUTTERIDGE,
Vice-president, A.M.R.A.

Mont Albert,
Victoria, Australia.

SULPHURIC ACID TANKS

Models of tank wagons are available in nearly all commercial ranges for either petrol or milk consignments. However, an interesting type of tank wagon which is rarely modelled is the sulphuric acid tank, which is a familiar sight on freight trains in industrial areas. The acid is widely used as a basis in many chemical processes, or as a cleaner in metal coating works.

The type illustrated is one which is familiar to the lines of the old G.W.R. The size of the tank does vary, the one here being one of the smaller variety.

The painting scheme, however, is the same for all types, black with white lettering, the name of the parent works being either Swansea Vale or Avonmouth, which are the two works of the Imperial Smelting Corporation.

These tanks usually travel in slow freight trains, as the liquid is classed as dangerous and corrosive.

Cardiff. D. CHAPLIN.

"TT-3"—A CLAIM

I read the "TT" article in the current RAILWAY MODELLER with great interest, and soon afterwards found the items on the market. I am starting building up my rolling stock as I stated before, beginning with a loco and a van, then buying up several mineral wagons (cheapest in the range at 3/8), unclipping the bodies and building my own prefab bodies on to the chassis. The result so far is three wagons, one van and a brake in addition to the two already mentioned, with two wagons, one van and a coach awaiting mounting.

I find the Tri-ang couplings work very well. Their large size is immaterial to a light railway project like mine, but they would be ungainly on a fine-scale layout. Incidentally, readers might like to know that I have developed a very nice shunter's pole (yes, another Welssmeare patent device!), which works these couplings well. It is a development of the standard pole and trolley turner which I used for several years with my tramway.

I would like here officially to claim a record. I think I must be one of the first amateur modellers, if not the first, to start preparing a scale layout using Tri-ang "TT" components, as I started building rolling stock on February 14, having heard that the system would be introduced in a few weeks.

Weston-super-Mare. M. W. BROOM.

Forthcoming Shows

HULL MINIATURE RAILWAY SOCIETY EXHIBITION

JUNE

10, 11 AND 12

Co-operative Hall, Hull

The society's first public exhibition is being staged in the Co-operative Hall, Kingston Square, Hull, at Whitsuntide, when the "O" gauge three-rail and the "OO" gauge two-rail layouts will be on show, together with a number of trade stands.

The proceedings are to be officially opened on Whit-Monday, June 10, at 12 noon by the Lord Mayor of Kingston upon Hull.

Times of opening will be: June 10 (Whit-Monday), 11.30 a.m. to 9 p.m.; June 11, 2 p.m. to 9 p.m.; June 12, 2 p.m. to 8 p.m.

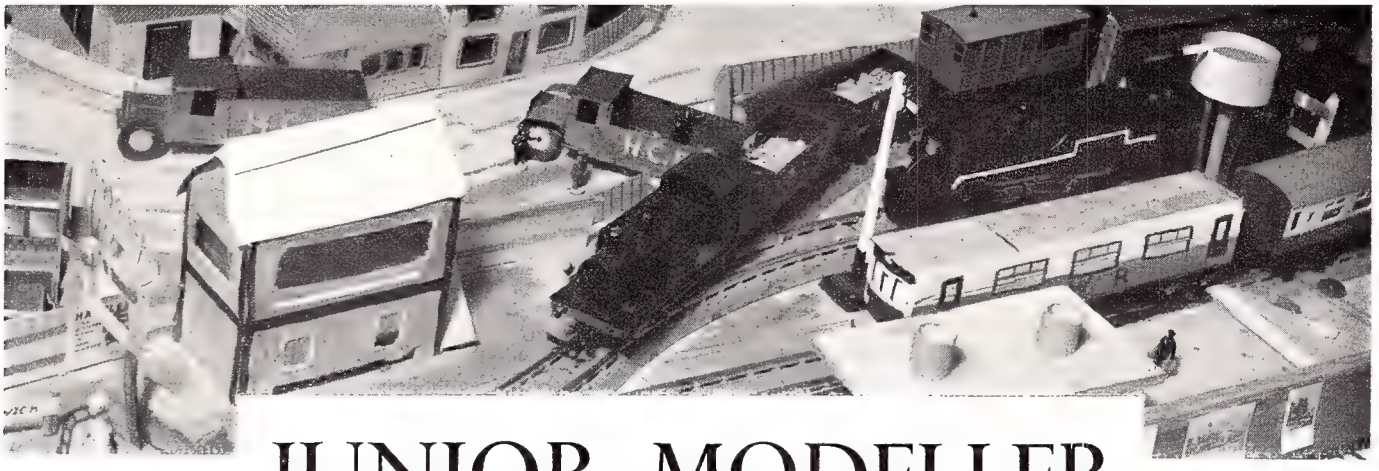
Light refreshments will be available.

Visiting members of model railway clubs and the general public will be heartily welcomed by the officials.

It is hoped that this effort will be the forerunner of further exhibitions at intervals.

The activities of the society have recently been moved to larger premises, members now meeting at Sportcraft, 7 Beverley Road, Hull, on Tuesday and Thursday evenings at 7.30.

Prospective members desiring further details of the society should communicate with the hon. secretary, Mr. E. A. Hoole, 26 Vermont Street, Hull, or at the headquarters.



JUNIOR MODELLER

Shunting proceeding in Hawick yard, with Hawick Coal Board lorry waiting to be loaded.

THE HAWICK & ALNWICK RAILWAY

by David E. Cooper

THE Hawick and Alnwick Railway was started in January 1956. It is an "OO" gauge line, but some parts are slightly out of scale.

A few years ago I had an "O" gauge clockwork railway, but after reading articles in this magazine I decided to sell it and buy a smaller gauge railway. This I have modelled into standards like those in this magazine.

The railway has been modelled on the floor in the spare room and mother says it can be a permanent spot.

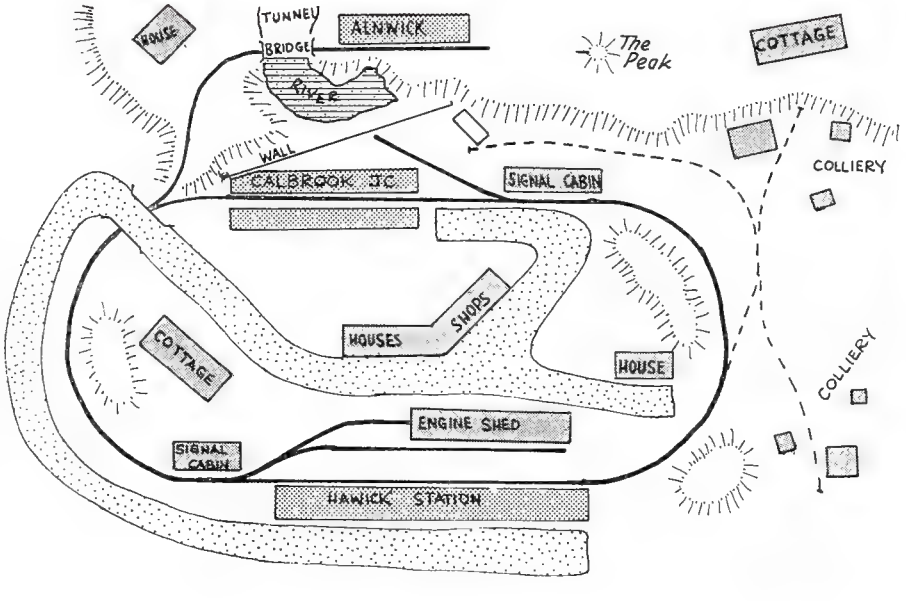
The railway has three stations. Hawick is the main station, where the engine sheds, goods sidings, etc., are. Leaving Hawick and coming along the track, we pass under a road bridge. Here is the line which branches off to Alnwick, and the second station, Calbrook Junction. This is a small station, where passengers change trains for Alnwick. Alnwick is a small station in the hills. There is a village gradually growing and this station will serve it. It is a steep gradient and trains usually need a banking engine.

My locomotive stud has four engines, including a 0-6-0 class 3F tank loco, a similar engine but converted to 0-4-0, an American 4-6-2 Pacific loco and a diesel coach.

The rolling stock consists of a corridor coach, two suburban coaches, a fish van, a couple of coal wagons and a brake van. My railway is not very big, but it has given hours of pleasure to my friends and myself and I do not think I shall make it any bigger or smaller; I shall just keep it as it is.

While the Hawick and Alnwick is neither over-large nor over-elaborate, it is undoubtedly a very satisfactory system for its owner, and a creditable piece of work for one only thirteen years old.

PLAN OF THE HAWICK AND ALNWICK RAILWAY



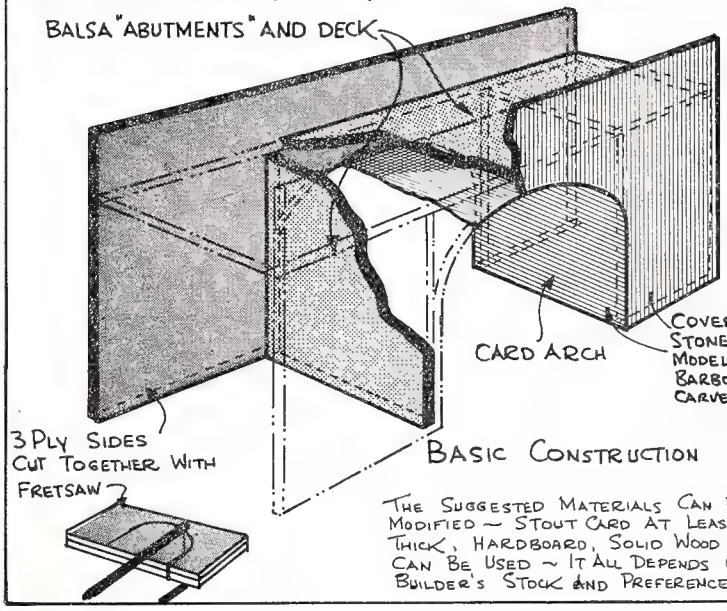
The mountain country around Alnwick.

The lower tracks, showing Hawick in the foreground and Calbrook Junction to the rear.

JUNIOR DO-IT-YOURSELF

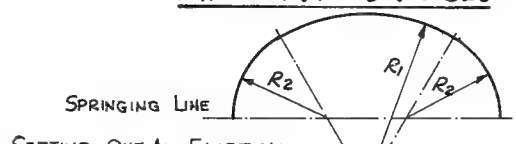
MASONRY BRIDGES

A MASONRY-OR BRICK-ARCH IS TAILOR-MADE TO SUIT ITS SITE FOR THIS REASON NO DIMENSIONS ARE GIVEN, AS THE MODEL SHOULD BE MADE TO FIT INTO ITS EXACT LOCALITY

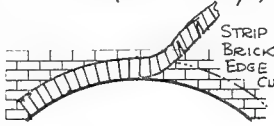

BALSA "ABUTMENTS" AND DECK
CARD ARCH
COVER WITH BRICK OR STONE PAPER, OR MODEL STONE WITH BARBOLA PASTE OR CARVED LINOLEUM.
3 PLY SIDES CUT TOGETHER WITH FRETSAW

BASIC CONSTRUCTION

THE SUGGESTED MATERIALS CAN BE MODIFIED — STOUT CARD AT LEAST 1/16" THICK, HARDBOARD, SOLID WOOD EVEN CAN BE USED — IT ALL DEPENDS ON THE BUILDER'S STOCK AND PREFERENCE!



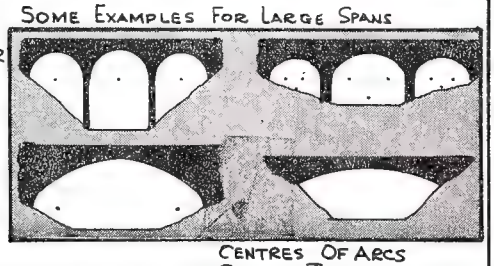
SETTING OUT AN ELIPTICAL ARCH BY THE 3 ARC METHOD (RADII EASIEST FOUND BY TRIAL & ERROR)



STRIP OF BRICK-PAPER 1 BRICK HIGH, CUT FROM VERTICAL EDGE OF PAPER. NOTCH TO CURVE ROUND ARCH

(STONE ARCHES CAN BE BOUGHT OR HAND-DRAWN)

SOME EXAMPLES FOR LARGE SPANS



CENTRES OF ARCS SHEWN THUS •

Personality Parade No. 66

John Mitchell ("Mitch")

Hitchin and District Model Engineering Club

Like many others, John Mitchell began with a "OO" clockwork table railway. Progressing to Hornby "O" gauge clockwork on his seventh birthday, he has been a keen enthusiast in 7mm. coarse scale ever since.

A founder member of the Hitchin and District Model Engineering Club, it is doubtful if many of the club members know his christian name. He is, however, responsible for electrical control and signalling on the club's "O" gauge layout. Apart from numerous signals, he has not yet completed a model of his own. Although more interested in operating than in construction he has just commenced the building of an "O" gauge stud-contact layout.

Married, with two children, his other interests include church work as secretary of Hitchin Congregational Church. In his employment he is responsible for the production of the RAILWAY MODELLER in the printing works at Letchworth.

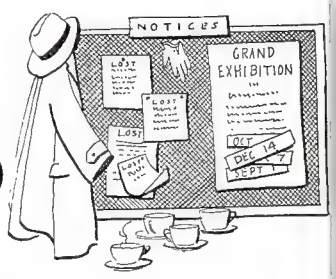
West Lancashire "O" Gauge Group

A clubroom has now been acquired in a central location in Crosby, near Liverpool, and the group layout has been installed.

Club evenings are held each Friday, and while some members are fully occupied in final adjustments to the track and electric circuits, others are working on rolling stock, buildings and scenery.

The layout will be on exhibition in the first week of September. Details will be available later. Hon. secretary, Mr. G. F. Atherton, "Malaysia," Bold Lane, Aughton, Lancs.

CLUB NOTICE BOARD



NOTES AND NEWS

Epsom and Ewell Model Railway Club

This club meets on the second Thursday in each month at Pit House, Ewell, Surrey, and is always ready to welcome visitors. It caters mainly for "OO," "O" and "S" gauges. The annual subscription is 10s. Hon. secretary, Mr. L. C. Krailing, 74 Weston Park, Weston Green, Thames Ditton, Surrey.

Lewes and District Model Engineering Club

The club's "OO" gauge model railway is now nearing completion, due in large part to the new members who joined last year, and the layout, with its scenic effects, is very pleasing. More new members are wanted to assist in the construction of rolling stock and additional station buildings and to help in keeping the club on a sound financial footing.

The club meets on alternate Friday evenings from 7.30 to 9.30 at Southover Grange, Lewes. All visitors are welcome and it is hoped that new members will be enrolled. All inquiries concerning membership should be made to the hon. secretary, Mr. W. M. Hebblethwaite, "Wharfedale," Goat Lane, Ringmer, Sussex.

The Model Railway Club

Members and visitors are asked to note that the chairman's evening on June 27 is being held at Caxton Hall (this information being inadvertently omitted from the fixture list) and there may well be a pleasant surprise for everyone on that evening.

Outdoor line operation is now in full swing and club members who wish to experience the joys of operating in the open will no doubt flock to the garden meeting at the chairman's home on June 29. We are keeping our fingers crossed for fine weather.

Inquiries to hon. secretary, Mr. D. A. Boreham, 10b Ealing Road, Northolt, Middlesex.

Tramway and Light Railway Society

On the visit to the Hastings Tramways Company it is hoped to hire the open-top trolleybus and also visit the works. Outward journey by steam, returning by electric to Victoria at approximately 10.15 p.m. Meet at 8.45 a.m. outside left luggage office, Charing Cross station.

There will be reserved compartments and tea arrangements, but a sandwich lunch is advised. The outward journey to Hastings will take advantage of being hauled by steam before the changeover of motive power.

Nottingham Model Railway Club

This club has, after three and a half years in existence, recently passed the fifty mark in membership. It would seem that as the membership grows so do outside activities.

A local cinema asked the club to stage a ten-day exhibition in conjunction with the showing of "Bhowani Junction." In the middle of this period the manager learned that this film was to be followed by "The Great Locomotive Chase" and the show was extended to cover this film.

In addition, the club visits a local boys' home each week to iron out any snags on their own railway and to try to find ways for them to gain even greater enjoyment from its operation. Three members were also invited to lecture at a Leicestershire boys' club training weekend on the basic ideas and principles of the hobby.

In the midst of all these activities the club is struggling to make the necessary arrangements for its first exhibition, which has been fixed for the last week in September.

A closer liaison with the Alfreton club has recently been formed and it is hoped in the future to arrange exchange visits with that club. It is felt that both clubs will gain much benefit from these.

The Bradford and District Model Railway Society.

This society has now arranged a regular series of meetings, to be held weekly at its clubrooms at the Laisterdyke Congregational Church, Killinghall Road, Bradford. The dates are the first Monday, second Tuesday, third Wednesday and fourth Thursday in each month. The programme for at least the next two months will be concentrated on the design and construction of the society's "O" gauge layout.

Hon. secretary, Mr. W. Turner, 7 Ashbourne Haven, Bradford 2 (tel. 38298).

The Bournemouth Model Railway Society

A headquarters for this society is at last in sight, and by the time this report is published it will have its own clubroom.

Two exhibitions will be held this summer. One will be in conjunction with British Railways for the Southern Railway Orphanage and will be held at Bournemouth West station during two weeks in July; the other will be for one day, August 17, at a fete to be held at Highcliffe Castle, near Christchurch.

Ordinary meetings during the summer will be held on June 14 and July 19, and a number of visits are being arranged.

Further details about the society may be obtained from Mr. D. G. Yule, hon. secretary, 23 Elmsway, Southbourne, Bournemouth, Hants (tel. Southbourne 47728).

JUNE MEETINGS

Birmingham Model Railway Club

5—Track construction and maintenance.
13—Track night.
19—"Trade tracks." Mr. M. A. L. Duff.
27—Track night.

Fylde Model Railway Society.

11—Open night.
25—"OOO" gauge modelling. Mr. R. Vickers.

Hoddesdon & District Model Railway Society

5—Layout construction.
12—Visit to G.P.O. underground railway.
19—Running night.
26—Electrical wiring simplified—2. Mr. R. Chapple.

Model Railway Club

6—"Those were the days." A talk by Frank Shaw at Caxton Hall.
20—Track night (G.W.R.) at Hammersmith.
27—Chairman's evening at Caxton Hall.
29—Garden meeting at Sussex House, S.E.25.

Nottingham Model Railway Club

4—Model railway brains trust.

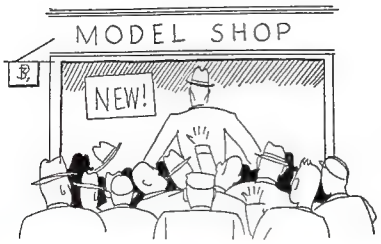
Tramway and Light Railway Society

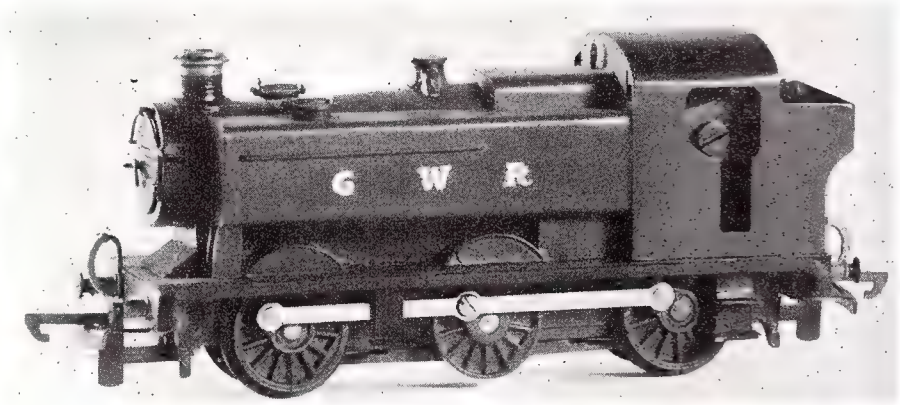
2—Visit to Hastings Tramways Company.

Wimbledon Model Railway Club

12—Talk and refreshments.

TRADE WINDOW





" TT " GAUGE 94XX 0-6-0PT

EAMES OF READING

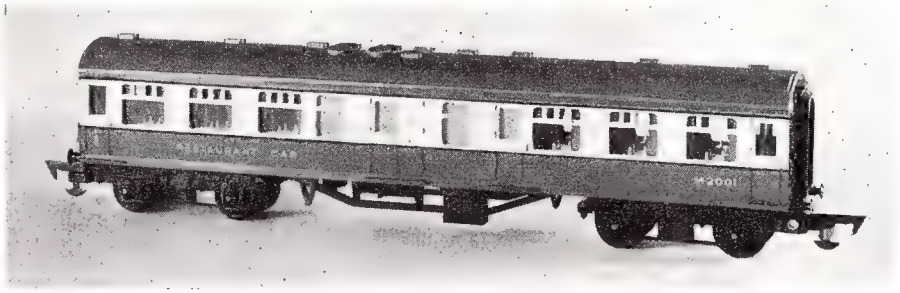
24 Tudor Street, Reading

£9/19/6

The photograph above shows Eames's " TT-3 " 94XX 0-6-0PT built on to the standard Tri-ang 0-6-0 chassis. The standard of finish is high, while the performance is excellent.

We understand that this model is but the first of a series of such adaptations that Eames will be offering. The initial models will be to Western Region prototypes to match the forthcoming Castle class promised by Tri-ang later this year.

As can be seen, the model has captured the atmosphere of the prototype, though, due to the fact that the wheelbase is that of the standard " Jinty " mechanism, there are minor variations from exact scale. This is an excellent opportunity of adding variety to the " TT " locomotive stud.



TRI-ANG " OO " RESTAURANT CAR

ROVEX SCALE MODELS

Margate, Kent

10/6 complete

A welcome addition to the Tri-ang main-line coach range is this neat restaurant car. Of the centre kitchen pattern, it is not only neatly detailed externally but is replete with internal fittings into the bargain, down to plates and condiments on the tables !

In common with all Tri-ang main-line stock, it is slightly shorter than true scale length, in order to negotiate the necessarily sharp curves of its parent system, but this is something of an advantage on the usual cramped layout in that a train occupies that much less room.

This is an extremely attractive model at a remarkably reasonable price.

TRI-ANG " OO " ELECTRICALLY OPERATED LEVEL CROSSING

ROVEX SCALE MODELS

Margate, Kent

27/-

Practically every model railway has, somewhere on the main line, a level crossing. Usually it is a purely dummy arrangement, with the gates held permanently closed against the road. During operating sessions this is a convenience, but visitors have a habit of asking " Does it work ? " and the modeller feels slightly embarrassed when he has to confess it is a dummy.

The new electrically operated level crossing gates produced by Tri-ang offer the solution to this impasse. The gates are normally held open to the railway by a light spring, but when the mechanism is electrically energized they swing relatively gently, to remain across the tracks so long as the current is passed.

This arrangement is ideally suited for the operating layout, but it must be borne in mind that the twin tracks are set to the wide Tri-ang centres.

This eminently practical and ingenious mechanism will enhance the realism of any " OO " gauge layout.

" TT " GAUGE POINT LEVER

S & B PRODUCTIONS

3 Orton Buildings, Portland Road, London, S.E.25

2/5 each

As the first of a proposed range of " TT-3" items, S & B Productions have produced a neat diecast point lever. It is based on the general design of their well-known universal " OO " lever, but is smaller and has a shorter throw. Although primarily intended for " TT-3 " layouts, it can also be used for any " OO " or " EM " system using prototype pattern points with a $\frac{1}{8}$" throw.

Its neatness will doubtless appeal to modellers who require that little extra scale accuracy. We would also point out that the S & B Universal " OO " point lever has been used with success for fine scale " O " gauge points.

As we go to press we have received examples of the new " TT " signals. A photographic review will be included next month.

COLOUR LIGHT SIGNALS, " OO " GAUGE

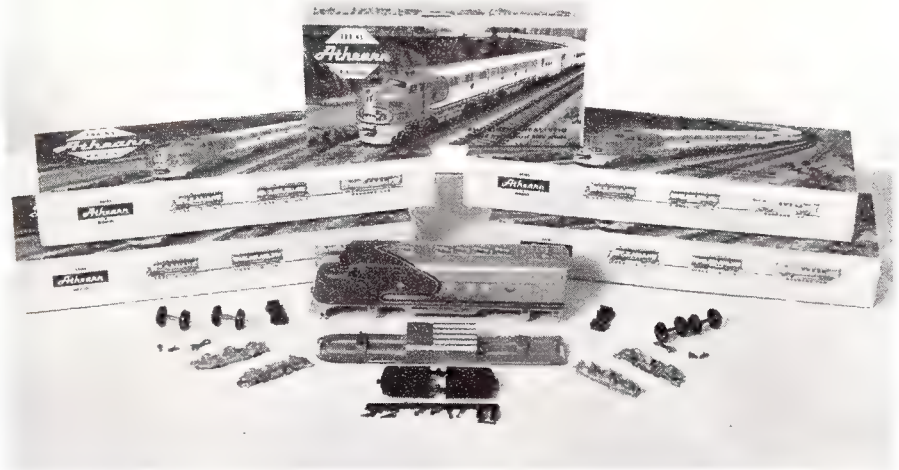
BRADSHAW MODEL PRODUCTS

40 Waterloo Street, Hove 2, Sussex

Single 12/8
Double 20/5
Ground 12/8

The signals illustrated above are the new, modified version of an old favourite

by Bradshaws. These are now fitted with 12-volt replaceable bulbs, while the leads are colour coded red, green and brown (common return). Colour lights are particularly suited for model railways, as they are easy to install and give very little trouble in operation, and these neat models enable the modeller to begin his own modernization plan by installing up-to-date colour light signals.



ATHEARN KITS

Imported by

BRADSHAW MODEL PRODUCTS

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Bradshaw Model Products have been fortunate in obtaining an import licence for a consignment of the well-known American Athearn kits, comprising A and B unit diesels and a selection of coaches. We have inspected samples of these fine kits, and can thoroughly endorse the excellent reviews given them in the American press. Interested readers should contact Bradshaws for full details and prices.

HAMMANT & MORGAN PRICE REDUCTIONS

As will be seen from their current whole-page announcement, Messrs. Hammant and Morgan, the well-known manufacturers of power supply equipment, have been able, from June 1, to reduce all prices in their range while maintaining their high quality. As a typical example, the popular Safety Minor Unit has been reduced by 10/- to 45/-, while the saving on the 4-amp. Super Unit is no less than 21/-! This development will, we feel sure, be welcomed by all readers.

COACH LIGHTING

Peter Carter, of 11 Horton Grange Road, Bradford 7, announces that he is now able to fit his well-known coach lighting sets into the new Exley Zephyr and Popular coaches at 13/6 per coach, this sum including the return to the customer by registered post of the completed coach. He can also undertake to fit any make of coach with interior lights at the same price, while as an extra brake vans can be fitted with red tail lights for 8/6.

ALTON TOWERS LAYOUT

We are pleased to announce that the layout at Alton Towers (not **Grange** as stated in our article last month) will be open to the public at Whitsun. We shall be giving further details of this interesting system next month.

" O " NEW B.R. BLUEPRINTS " OO "

P.431, 57ft. 2nd Cl. Compt. Coach, **3/-** ; P.432, 57ft. 1st/2nd Cl. Compt. Coach, **3/-** ; P.433, 57ft. 2nd Cl. Compt. Brake Coach, **3/-**. Please state " O " or " OO " prints when ordering. New 11th Ed. Catalogue, price **1/2** post paid.

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L.M.S. 2-6-4 tanks 2524, **£10/10/-** and **£15/15/-.**
G.W.R. " King," super detail, **£55.**

CLOCKWORK LOCOS

4-4-0 B/Lowke " Prince Charles," **£3/10/-.**

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Exley " O " coaches, new and secondhand. Exley " OO " metal coaches. Exley " OO " plastic new B.R. maroon side-corridor bodies, **34/-.**

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Super stone walls, straight	3/11	3/11
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D/line super tunnel mouths with abutments	15/–	—
Hump-back bridges, adjustable for width	18/–	—

BOOKS :	
" OO " Gauge Layout and Design (Carter)	5/–
Modelling Old-time Railways (Beal)	15/–
The Highland Railway (S.L.S.)	10/–
Leek and Manifold Railway	5/–
Narrow Gauge Album (P. B. Whitehouse)	25/–

Postage extra

" OO," " TT " or " O " Parts, Models and Book Lists 6d.

"TT" SIGNALS

Thousands of visitors to the Model Railway Club Exhibition saw the first samples of these attractive models and they were greatly admired. As a result our production capacity is going to be very heavily taxed to supply the number of orders already received from our distributors. They are designed for hand operation, but provision is made for remote control from a signal box when used on permanent layouts. They are made to 3mm. scale and the posts are also correct, the two-arm being higher than the single arm.

The first three types are :

SINGLE ARM HOME	3/–
SINGLE ARM DISTANT	3/–
TWO ARM (HOME AND DISTANT)	3/9

Including purchase tax.

A two-arm Bracket Signal is in course of production and will be available shortly.

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S. & B. POINT LEVERS are designed to give perfect operation and positive locking with full electrical contact for both " OO " and " TT " points made to the recognized Universal Standards.

The fine detail work and superb finish in B.R. blue-grey make these two Point Levers supreme.

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There are tens of thousands already in use all over the world.

Price, either type **2/5** including purchase tax

We are not neglecting " OO " and some interesting new items are on the drawing board for future production.

Price list of all our productions 6d. post free.

S & B Productions

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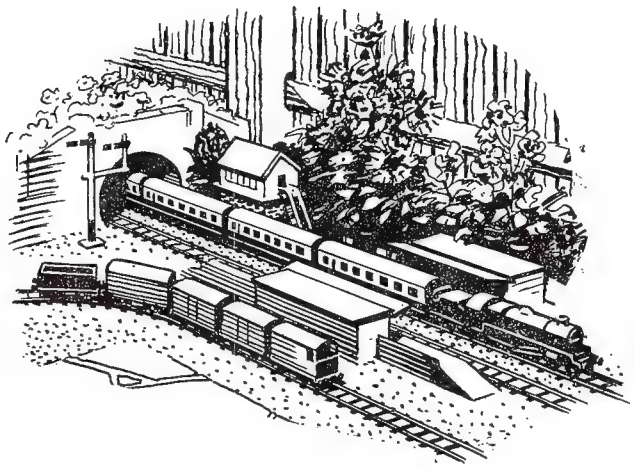

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Write now, quoting reference MR/108, for Model Railway Catalogue, gauge "O," price 2/-. Also including details of gauge "OO."

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"RAILWAY MODELLER" back numbers, 9d. each plus postage. November, December 1951; January, April-July 1952; March, July 1953; May, August-November 1954; May-November 1955; February-December 1956. 1/- each, February-May 1957. Peco Technical Advice Bureau, Pecoway, Station Road, Seaton, Devon.

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TRIX Items. Cost over £30. 3 amp transformer, two controllers, three locos, etc. Accept £13 the lot or will separate. S.a.e. for list. Box No. 57/9.

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EXLEY RESTAURANT CAR with six-wheel bogies £4/10/-. Also other restaurant cars, wooden bodies, fully detailed. S.a.e. list or inquiries. B. Wearer, "Avondale," Cecil Road, Ashford, Middlesex.

A LARGE QUANTITY of H/D track, plus a few accessories and Hugar No. 1 controller, in excellent condition, worth over £21, one-third being brand new. Send s.a.e. for details, Allen, 4 Copse Edge Avenue, Epsom, Surrey.

JAMIESON "HALL" body and running gear, partly assembled, 50/-, or exchange Farish or Exley coaches. Offers to Glass, 36 Lynmouth Road, London, N.2.

VERY FINE MARKLIN stud layout, five locos, rolling stock, turntable, signals, controllers, etc., approx. half cost. Perfect condition. Would separate. S.a.e. for list. G. Dicker, The Chilterns, Belper Road, Luton, Beds.

FOR SALE, Gauge "O." Two Hornby locos, transformer, Pullman coaches, trucks, etc. Track, station, etc. Can be viewed by appointment. Poole, 51 High Street, Camberley, Surrey. Tel. Camberley 888.

LARGE AMOUNT Hornby-Dublo track, very good condition, locomotive "Sir Nigel Gresley." Send s.a.e. for list. Curruthers, 13 Wardown Crescent, Luton.

TRI-ANG RAILWAY, two coaches, five wagons, Rivarossi B & O. loco, thirty straight and curved rails, four pairs points, controller and accessories. £7. A. Cowles, 249 Coldhams Lane, Cambridge.

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"HO" GAUGE COACHES by Reidpath, etc. L.M.S. particularly preferred, but any company considered. Details, price to Box 57/1.

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WANTED, "Rokal" equipment. Locos, rolling stock, track, points, accessories. Anything considered. Any condition. Williams, Falconbury, Little Common, Bexhill-on-Sea.

GOOD QUALITY gauge "O" and gauge "OO" locomotives, coaches, or complete collections purchased for cash. Also required, passenger-hauling live-steam locomotives, stationary engines, beam engines, traction engines, etc. Cherry's (Surrey) Ltd., 62 Sheen Road, Richmond, Surrey. Telephone RIChmond 2454.

Miscellaneous

FOR SALE, well-known model kit manufacturing business situated in N.W. Lancs. Business complete with plant and machinery and low rental premises, but could easily be moved to other situation. At present in production with extensive and exclusive range kits. Capable expansion. Price reasonable and could be purchased on deposit with balance spread over period. Genuine proposition. Only serious inquiries considered. Box No. 57/8.

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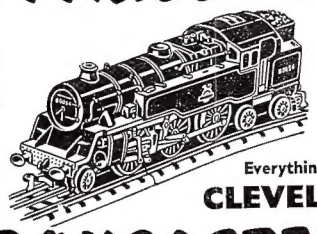

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